

WEEK
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BUSINESS WEEK

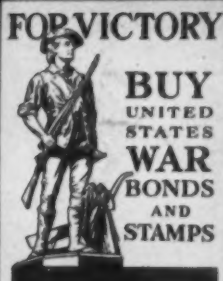
START
OF WAR
1939



Record stockpiles of ore for the war-hungry blast furnaces of the Cleveland district—before winter closes the lakes.

BUSINESS
WEEK
INDEX

PUBLISHED BY THE MCGRAW-HILL PUBLISHING COMPANY



DEATH CAR...

ONLY A CHILD'S TOY on an unlighted stairway. Yet as lethal as a speeding truck for killing or crippling. For causing heartbreak and tragedy in someone's home.

Accidents . . . in the home . . . on the highways . . . in factories and offices . . . cost this nation 102,500 lives last year. This tragic toll, preventable to a great extent, was augmented by the permanent disabling of 350,000 other people . . . by 9,000,000 lesser casualties.

Production-wise, America's war effort lost heavily. In all, 430 million man days were lost forever. Enough to have built a total of 20 battleships, 100 destroyers, 9,000 bombers, and 40,000 tanks! Money-wise, the loss was almost 4 billion dollars!

Where did these accidents happen? Two-thirds of them happened outside of industry. In the home, where workers take chances they would not dream of taking on the job. They happened in darkened hallways . . . in bath tubs . . . in garages and basements. They happened in industry where someone gambled with safety.

No matter what you do, your life is precious to this nation. Don't take chances with it. Guard it for America . . . at day . . . and at night. Fight carelessness, the Master Saboteur! Join the anti-accident crusade! Help save a life!

The perfection of the famous "Eveready" fresh DATED flashlight battery called for coordination between various Units of Union Carbide and Carbon Corporation. The exact grade of graphite necessary for the "mix" was developed by the Acheson Graphite Corporation. Special alloy for protecting molds and machinery was produced by the Haynes Stellite Company, and Carbide and Carbon Chemicals Corporation provided a specially prepared paint made of "Vinylite" resins for the spun metal cap.



"EVEREADY" FLASHLIGHTS AND BATTERIES
NATIONAL CARBON COMPANY, INC.

30 EAST 42ND STREET • NEW YORK, N. Y.
Unit of Union Carbide and Carbon Corporation



The words "Eveready" and "Vinylite" are registered trade-marks.



ON TWO FRONTS —*Make Your Dollars Fight*

OVER FIFTY MILLION PEOPLE have bought War Bonds—a typically American response. But the need is greater, much greater. So a second financial front has been opened.

The U. S. Treasury is offering a \$9-billion Victory Loan—with eight different Government issues to meet every investor's requirements.

Throughout the nation, Victory Fund Committees of patriotic Americans have volunteered to sell these securities.

Welcome the Victory Fund man. Ask about the 26-year 2½% Victory Bonds; they provide an attractive yield and are acceptable as bank collateral. Shorter term issues, U. S. Savings Bonds—Series F and G, and Tax Savings Notes are also sold by the Victory Committees.

Make your dollars fight on two fronts. Buy more War Bonds out of income... invest surplus funds in the Victory Loan. Fight as hard with your dollars as American boys are fighting with their lives.

BANKERS TRUST COMPANY

NEW



YORK



Pass the "pineapples"!

It takes an alert, well-trained soldier to fight with hand grenades. Just about five seconds after the "pineapple" leaves the soldier's hand, a lever flies off, a percussion cap is struck, and the fuse ignites.

Timing—doing the right thing, at the right place, at the right time—must become second nature to every good fighting man.

Timing is also vital on the war production front. The sudden failure of power-plant equipment, for example, can halt factory production, hold up supplies urgently needed at distant fighting fronts.

For seventy-six years, Hartford Steam Boiler and its large staff of engineers and inspectors have specialized in power-plant safety . . . seeking out weaknesses *before* disastrous accidents can happen.

Today, all of the experience and technical knowledge acquired by this oldest and largest specialist in power-plant insurance are at work on America's industrial front . . . helping to keep boilers steaming and swift wheels turning at the greatest production job in the history of this nation.



Covers: Boilers • Pressure Vessels • Steam, Gas and Diesel Engines • Turbines • Electrical Equipment

**THE HARTFORD STEAM BOILER INSPECTION
AND INSURANCE COMPANY • Hartford, Connecticut**

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Henderson Expendable

The Administration is swinging to the belief it may have to throw its Price Administrator overboard to save some remnants of the price control program. A lame duck Congress quacked at his heels to its dying breath; a beligerent new Congress is getting ready to make a meal of him.

The Sore Spot

The real issue is price control itself. The explosion of wrath against Henderson was fired by the breakdown of fuel oil rationing. But this was only the fuse that set off accumulated resentment against price control. Rationing of scarce goods actually is popular; the idea of fair shares appeals to public emotions. But where, after all, can Henderson find support for a tough anti-inflation program:

From labor? No. Labor wants the feel of more money in long-empty pockets.

From farmers? No. They see an opportunity to improve their take, also to settle old mortgages with cheap money.

From business men? No. Squeezes are feared and subsidies are considered red tape.

From property owners? No. Rent control is hindering a comeback from depression lows.

From military agencies? No. They politely parted company with Henderson long ago, now rely on contract renegotiation.

A Counteroffensive

Henderson knows his position better than anyone. He won't change his course but realizes that if he's "expended" the whole program will deteriorate into a series of compromises wherein pressure will be the main ingredient, price control a byproduct.

Hence the OPA boss is trying to stave off fate (1) by currently "laying off" Congress without capitulating; (2) by more or less subtly publicizing the fact that he is merely rationing's errand boy, that the programs are cooked up by WPB, oil and rubber agencies, and the Department of Agriculture; (3) by working up a new batch of figures (soon to be released), showing that price control is a statistical success, and (4) by resigning as director of WPB's Office of Civilian Supply to shorten his lines, concentrate on saving OPA.

• **The Last Alternative**—If this program fails, Henderson will have to abdicate

an untenable position. Congress could refuse him further funds and virtually incite the populace to riot by publicly shredding OPA's tattered prestige on the Capitol floor.

No Help from Byrnes

Henderson, meanwhile, is getting little effective help from Jimmy Byrnes. With a reputation as a congressional fixer from away back, the economic stabilizer was expected to smooth over the OPA-Congress battle, establish some kind of a working relationship.

But Byrnes has failed. He has offended old congressional friends by taking the attitude that now he's working for the President, that he isn't one of the boys any more. And many farm bloc Senators suspect that Byrnes is taking orders from Henderson rather than vice versa.

Trying Another Tack

Stymied on price control by fiat, Byrnes is now exploring the possibilities of price control from the other end—by further siphoning purchasing power. Last week he met with heads of the Treasury, Federal Reserve, the Budget, and the congressional tax committees. Staring rather hopelessly at a gross inflationary gap approaching \$40,000,000,000, they discussed possibilities of a spendings tax, a sales tax, a scheme for rationing money (by selling at graduated prices coupons that would have to accompany all purchases). Except for a sales tax, none of them looked very promising in the face of an incoming Congress firmly resolved to make the war easy for civilians.

More Czar Power

Joseph Weiner becomes boss of the Office of Civilian Supply, now that Henderson has resigned that post, but it's a rapidly diminishing agency. Its big job is to appear as a claimant agency under the Controlled Materials Plan for production that isn't strictly military.

However, appointment of a series of industry czars has cut into the job. Ickes, as petroleum boss, has already been made a claimant agency to program the material needs of the oil industry.

Chances are Jeffers (for rubber), Wickard (for foods), Eastman (for transportation), Blandford (for housing), and a new WPB facilities unit (for industrial expansion) will get the same authority soon.

Fight Centers on Flour

Crux of the immediate dispute between the congressional farm bloc and Leon Henderson is the flour price ceiling. Despite daily negotiations, no solution is in sight.

A proposed compromise, whereby flour prices would be raised to a point that would permit wheat prices to increase between 6¢ and 10¢ a bushel, only set off another bitter attack upon Henderson and Byrnes.

Byrnes, in proposing a 58¢-a-barrel increase in the flour price ceiling, asked in return for authority to sell 150,000,000 bushels of Commodity Credit Corp. wheat to millers at below parity prices.

The Senate Agriculture Committee, egged on by the grain bloc, immediately reported a resolution for an investigation of the Administration's whole farm price policy and charged Henderson and Byrnes with attempting to "evade the law."

The grain bloc has appealed to Wickard for help, with a view to getting a showdown on Administration policy, but that gentleman apparently doesn't hanker to go into battle so soon after his designation as Food Administrator (BW—Dec.12'42,p16).

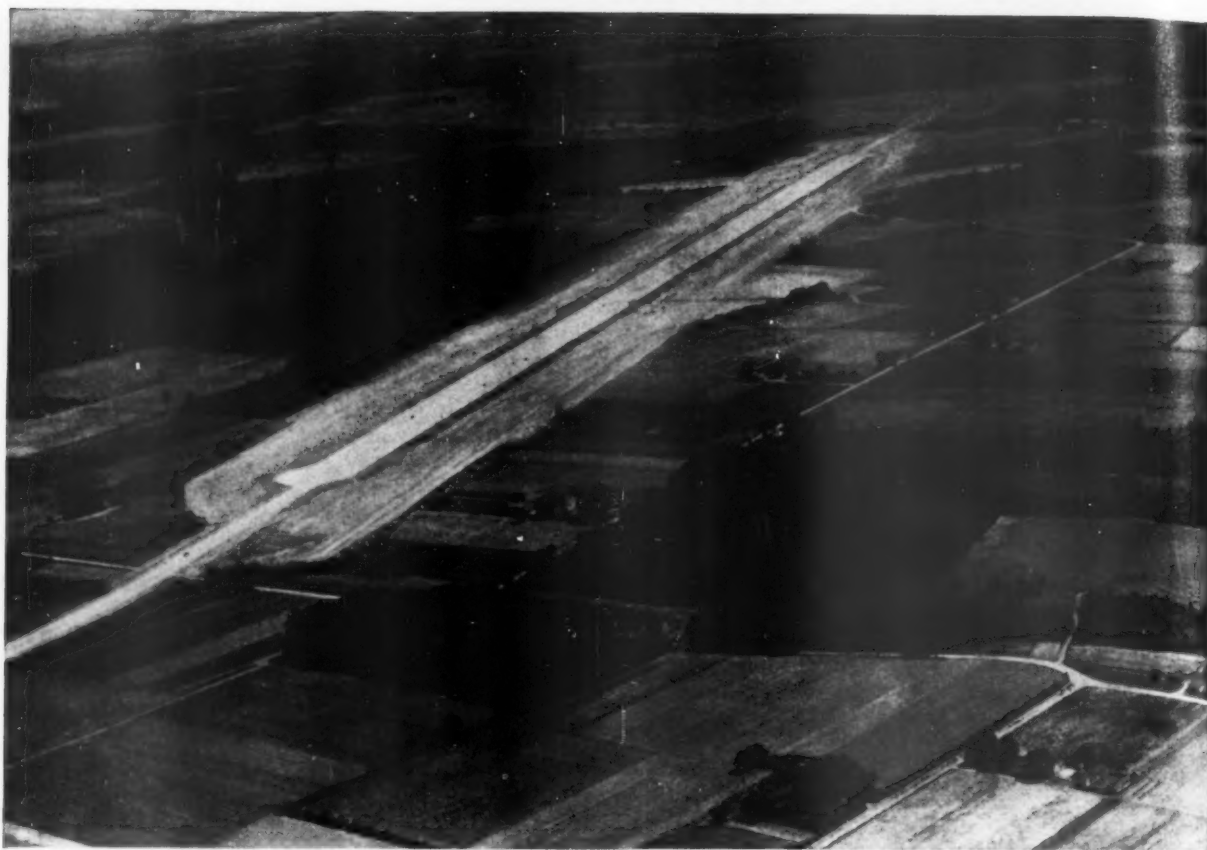
• **Shortenin' Bread**—Meanwhile, trading in wheat and flour is at a standstill, and reports indicate that the milling situation is getting extremely serious.

Wilson's Status Fortified

Production Vice Chairman Wilson is given much of the credit for bringing the Army and Navy around to the view that their inflated production plans would have to be cut back. He'll continue more aggressively now that Donald Nelson has sewed up his authority with relation to the services in a series of orders supplementing the vague agreement of two weeks ago (BW—Dec.5'42, p5). The orders give Wilson full responsibility and direction over scheduling military production to insure that schedules don't conflict, are in balance, and are consistent with production possibilities. He's empowered to demand any information he wants as to war production or procurement, to consult direct with producers as well as with service officials.

The line of demarcation between Wilson and Eberstadt is somewhat clarified by the orders, which give Wilson control over preparation of schedules and claims for materials submitted to Eberstadt. Eberstadt may hack the schedules down to make them fit ma-

OASIS IN CONCRETE FOR PLANES THAT CAN'T MAKE PORT



Air view of the country's pioneer flight strip, made with Lehigh cements. (Official photograph, U.S. Army Air Forces)
Contractor: Rea Construction Company

Faster than any wind you cleave the clouds, your engine sweetly humming. The earth stretches far below like a giant checkerboard. Suddenly that purring power-house sputters, coughs, threatens to quit. You look for a place to land.

And there, like an answer to prayer, it is! Down below, within gliding distance, it gleams reassuringly—an emergency landing strip of smooth concrete. Surely, the concrete flight strip, laid at strategic intervals along our public roads, is one of the most sensible safety developments in modern aviation, destined to preserve many useful lives.

Above is a picture of the first flight strip ever to be built in this country. The concrete for this pioneer strip was made with Lehigh cement.



Lehigh cement has made the concrete, also, for such diverse war projects as armament factories, army barracks, camp roads, defense housing, gun emplacements, bomb-proof shelters. For such work, Lehigh's cement needs no time-consuming "conversion"; it is as ready to make a pill box as a pavement. In many projects it has eliminated the need for critical steel. And when speed is all-important, Lehigh's Early Strength Cement makes service-strength concrete in $\frac{1}{3}$ to $\frac{1}{2}$ the usual time.

Because Lehigh's facilities are extensive and nation-wide, they have been thus far sufficient to give priority to the demands of war; and, besides, to serve promptly almost every Lehigh dealer and the essential needs of his community.

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. . . . CHICAGO, ILL. . . . SPOKANE, WASH.

material supply. Thereupon, it's up to Wilson, with Eberstadt's advice, to re-adjust the schedules.

• **Playing Ball**—Personal relations between the two men have become warmer in the last few weeks. By solving some tricky technical problems in expanding material supply, Wilson is making himself indispensable to Eberstadt.

Record of Renegotiations

Renegotiation of Army war contracts between Apr. 22 and Dec. 1 netted \$124,220,400 in refunds and \$705,112,400 in price reductions. There's a lot more to come before the books are closed on the early hectic period of war production, but price adjustment officials say renegotiation rapidly will become a smaller and less vexing problem.

Production costs, which were unknown at the outset, have been established by experience. More exact scheduling of production also is expected to add to the stability of operations. These factors combine to permit negotiation of contracts, in the first instance, with more certainty with respect to contractors' profits.

The War Department Price Adjustment Board reminds contractors that if they will come forward now for adjustment of their contracts, instead of hanging back until they are reached, price adjustment officials will give them prompt attention.

• **Fiscal Reports Aided**—Thus contractors will be able to report to stockholders on year-end positions without having to allow for contingent liabilities dependent upon the results of renegotiation.

Cancellation Blast Due

Labor and congressional investigating committees are getting ready to raise a howl about unemployment and financial losses resulting from contract cancellations now underway. They are frightened by rumors that as much as 25% of outstanding contracts will be canceled.

Although they'll pound hard at bad planning by the services as the cause of present cancellations (BW—Dec. 5 '42, p15), this is water over the dam. What they'll hope to get is a smoother process for running new contracts into plants behind canceled ones where possible.

So far, it's believed that cancellations amount to about \$19,000,000,000 out of a \$160,000,000,000 program, and much of this is pure paper, representing abandonment of work planned for the future.

• **Bigger Cut Eyed**—Cuts proposed in contracts for new plant facilities bulk

larger, amounting to about \$2,000,000,000 out of about \$6,000,000,000 worth of unfinished industrial expansion.

CMP's Hidden Flaws

Opposition on principle to the Controlled Materials Plan (BW—Dec. 12 '42, p41) has disappeared inside WPB, but some of CMP's warmest supporters are getting worried lest the plan get a terrible black eye when it goes into effect in the second quarter of next year.

Trouble is that CMP was introduced with much of the detail still hazy and tied to an extremely optimistic time schedule. For instance, no final decisions have been reached on the exact handling of many Class B products or even, in some cases, what products fall in Class B. Yet claimant agencies are supposed to have gathered bills of materials on the bulk of their production programs by the middle of next month.

Getting Back to PRP

Rules governing requirements estimates under CMP are being relaxed. Claimant agencies will be permitted to submit mere estimates of their contractors' needs. By and large, the only way they can gather such estimates is by asking contractors and subcontractors what they'd like to have.

This arrangement is as horizontal as PRP ever was, is subject to the same evils of inflated requirement estimates and unbalanced material allotments to contractors and subcontractors. Yet CMP doesn't even have the inventory-control advantages of PRP. Since PRP and CMP will be running simultaneously, the second quarter looks like sheer hell for many manufacturers.

• **Only Schedules Dropped**—CMP is a double system, with double paperwork. One side is a scheduling plan built around bills of material, the other a materials allotment plan built around allotment numbers, applications for them, and extensions of them. Except in the steel industry, general hope is that the allotment part can be dropped eventually. So far, it's scheduling that's going by the board.

General Tire Buys Networks

For the first time in more than a decade an important radio hookup has changed hands with the sale of the Yankee and Colonial networks to General Tire & Rubber Co. Currently owned by the Shepard merchant family of New England, the two big regional chains comprise a score of affiliated stations, four network-owned stations, and two frequency modulation outlets. Sales

arrangement (pending Federal Communications Commission approval): \$1,200,000, of which \$990,000 is cash.

General Tire & Rubber attributes purchase of the new property to a desire for postwar expansion (the company already has an indirect stake in radio through W. M. O'Neil, son of General's president, W. F. O'Neil, who is sole owner of WJW, located between Akron and Cleveland).

• **Tax Problem**—The Shepard family apparently put the networks on the block to solve inheritance tax problems.

Getting Together on Steel

Hung up several times on political snags in Britain, the United States, and Canada, a Combined Steel Committee has at last been set up. It took some doing as steel companies are not international-minded.

Committee members are: Highland G. Batcheller (United States), chairman, acting for the Combined Production and Resources Board; G. Crowther (United Kingdom); M. O. Heller (United States), office of WPB Program Vice Chairman; Maj. W. E. W. Senior, British Ministry of Production; Douglas Campbell (United Kingdom), CPRB; Paul Homan (United States), CPRB; and D. B. Collyer, Canadian Department of Munitions and Supply.

Organization of the committee is the upshot of a report last summer by the American mission to survey British steel facilities. Headed by Charles Hook of American Rolling Mills, this committee recommended (1) that American shipments of steel to Britain be tapered off, and (2) that a quarterly check on British steel production be kept.

The committee's main job will be to suggest means of increasing output and obtaining the most efficient possible use of steel in the combined war production program in 1943.

• **No Pocket Money**—U. S. law prohibits the payment of salaries and expenses of commissions or other boards of inquiry that have not received a specific appropriation from Congress. It looks as if the British and Canadians will have to lend-lease the United States its share of any commitment that may be incurred until Congress makes an appropriation.

NWLB on the Fence

State and local governments won an impressive victory over labor unions this week when the National War Labor Board renounced jurisdiction over the labor relations of state and municipal agencies.

Immediately affected were 32,000

*"Do they have
the know-how
to handle our
work in that
little upstate
New York
company?"*



**"Yes, we checked
that point with
our bank—the
Marine Midland"**



Member Federal Deposit Insurance Corporation

WASHINGTON BULLETIN (Continued)

New York transportation workers and 400 employees of the Newark (N. J.) Public Works Department, involving C.I.O. unions, and 800 workers of the Omaha Gas & Water System under A.F.L.'s wing.

Not stated but implied was NWLB's admission that it could not or would not enforce federal economic stabilization regulations in such cases.

• **Feud Avoided**—The issue promised to arouse bitter political animosity against the Administration (BW—Dec. 12'42, p8).

Probationary M. of M.

There is a plain warning for labor in a National War Labor Board decision this week that its support for maintenance of union membership is qualified by the behavior of the unions. A maintenance-of-membership clause covering Yellow Truck & Coach Mfg. Co. employees at Pontiac, Mich., was awarded to C.I.O.'s United Automobile Workers, subject to reconsideration if there are any more work stoppages. Prime motivation of NWLB's public and labor members in granting m. of m. despite a series of strikes at Yellow was expectation that such action would aid union discipline and promote better industrial relations at the plant.

Management Man

The increasing activities of Eric Johnston as representative of business management in national affairs are being watched with interest in the Capital.

Chief plank in the platform that elected the new "moderate" president of the Chamber of Commerce was that management would benefit from closer, more effective collaboration with government—and with labor. Observing the increased coolness toward the Administration expressed at the recent convention of the National Assn. of Manufacturers (BW—Dec. 12'42, p24), Washington took special note of the President's choice of Johnston for the new three-man commission to handle the draft problem on federal employees.

The C. of C. head is also a member of Byrnes's Economic Stabilization Board and of the War Manpower Commission's Labor-Management Committee.

Looser Farm Credit Seen

Observers believe that a move to liberalize farm finance is in the offing. It's just a business of putting two and two together.

Herbert Parisius, appointed by Wickard as director of food production (page

58), will have the Farm Credit Administration under his wing. Parisius is a "graduate" of the Farm Security Administration.

By comparison with FSA, the FCA is old, conservative. In fact, Farm Credit's "tightness" has been the target of increasing criticism. So it's expected that with a Farm Security man in the saddle, FCA will have to give.

Airwaves Need Aid

Several Washington bureaus suddenly have shown concern over the plight of small local broadcasting stations, struggling to keep their kilocycles perking despite loss of many advertising accounts. Lacking network tieups, small outlets get little of the institutional advertising of big national sponsors. Meanwhile, local accounts are drying up while costs and taxes soar.

Since they are the only mediums available to Uncle Sam for reaching scattered rural communities, Washington is anxious to keep locals on the air. Gardner Cowles, Jr., Office of War Information assistant director, finds the situation especially bad in the Rocky Mountain area.

• **Subsidies Studied**—Communications Commission Chairman Fly believes something ought to be done but hasn't decided how it can be handled. Possibilities being mulled over include outright leasing of stations, cheap loans, or payments for government plugging time.

Lady "Sparks" Sought

Desperate for engineering personnel, broadcasting stations hope that AFL's Electrical Workers will issue a statement of policy urging local unions to admit women technicians for the duration. To date, most locals have refused though some have accepted wives of members.

Meanwhile, the Communications Commission has been asked to ease its standards for engineers.

Capital Gains (and Losses)

The Army isn't pleased by the authority that Wickard, as Food Administrator, has over its rations. It is maneuvering to confine Wickard to the realm of broad policy and maintain the decisions on how much and what kinds of food to buy. F. D. R. has commissioned Stabilizer Byrnes to settle disputes over Wickard's jurisdiction.

Taking note of chiding in the Baruch report, Rubber Director Jeffers is sending a four-man commission to Russia to study Soviet synthetic rubber techniques.

—Business Week's
Washington Bureau

FIGURES OF THE WEEK

	§ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*190.7	†190.0	†191.0	181.1	163.5
PRODUCTION					
Steel Ingot Operations (% of capacity)	98.4	98.6	98.7	98.3	97.9
Production of Automobiles and Trucks	17,835	19,935	20,205	22,300	95,990
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$14,343	\$15,409	\$28,129	\$42,319	\$13,744
Electric Power Output (million kilowatt-hours)	3,938	3,884	3,776	3,464	3,476
Crude Oil (daily average, 1,000 bbls.)	3,881	3,834	3,880	3,700	4,110
Bituminous Coal (daily average, 1,000 tons)	1,867	†2,149	1,867	1,863	1,894
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	76	80	86	80	89
All Other Carloadings (daily average, 1,000 cars)	51	55	61	62	50
Money in Circulation (Wednesday series, millions)	\$14,986	\$14,848	\$14,408	\$12,176	\$10,834
Department Store Sales (change from same week of preceding year)	+9%	†-1%	+20%	+7%	+9%
Business Failures (Dun & Bradstreet, number)	132	148	148	173	230
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	235.3	232.7	231.8	228.4	217.5
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	155.8	155.3	155.5	153.0	148.7
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	190.5	188.3	188.1	181.0	170.3
†Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
†Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
†Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.26	\$1.26	\$1.23	\$1.12	\$1.21
†Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.50¢
Cotton (middling, ten designated markets, lb.)	19.60¢	19.51¢	19.33¢	18.71¢	17.16¢
†Wool Tops (New York, lb.)	\$1.203	\$1.197	\$1.234	\$1.187	\$1.300
†Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	74.8	74.2	75.4	66.6	69.2
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.30%	4.29%	4.24%	4.33%	4.41%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.81%	2.81%	2.79%	2.85%	2.81%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.36%	2.36%	2.33%	2.32%	2.39%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.28%	1.28%	1.28%	1.17%	1.05%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	†-1%	†-1%	†-1%	†-1%	†%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	29,011	28,852	28,927	26,022	24,682
Total Loans and Investments, reporting member banks	38,444	38,387	37,691	31,736	29,891
Commercial and Agricultural Loans, reporting member banks	6,157	6,192	6,359	6,552	6,675
Securities Loans, reporting member banks	1,134	1,089	911	879	980
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	24,843	24,808	24,027	17,346	14,883
Other Securities Held, reporting member banks	3,297	3,284	3,323	3,546	3,651
Excess Reserves, all member banks (Wednesday series)	2,800	2,500	2,400	2,782	3,842
Total Federal Reserve Credit Outstanding (Wednesday series)	5,813	5,460	4,925	2,708	2,286

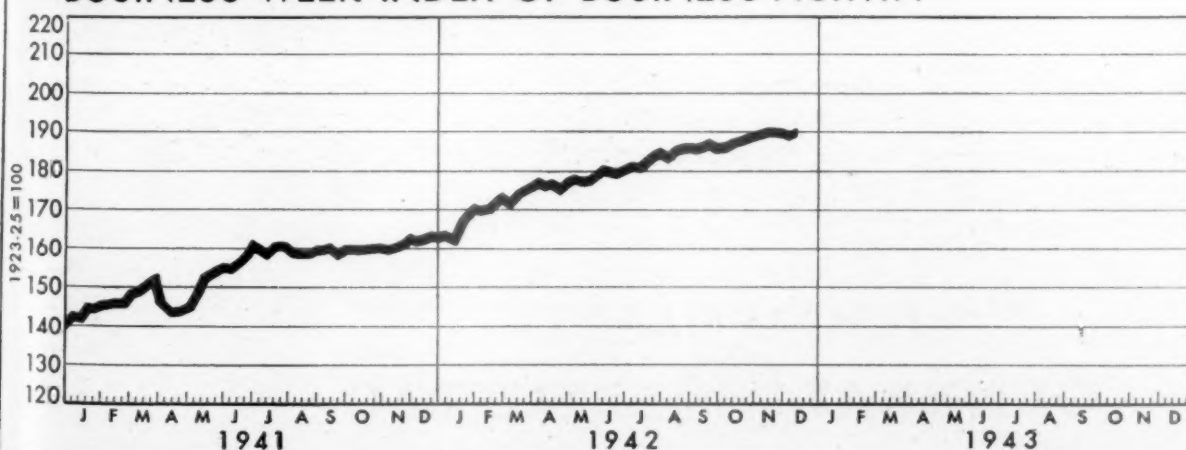
* Preliminary, week ended December 12th.

† Revised.

‡ Ceiling fixed by government.

§ Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY



G-E WARTIME LIGHTING CONSULTANT

scores again!



.. Finds "white collar" job at machine!

A SIMPLE white collar added—yet it does an important job on this milling machine. It helps cut errors, waste and eyestrain—saves valuable time in making the tools of war . . . *by reflecting light on the vernier scale . . . making its figures easy to read.*

Put there by one of G-E's wartime lighting consultants, it is only one example of the application of G-E's practical knowledge of lighting for production. Often other simple suggestions can make a big difference—things like washing lamps and reflectors regularly; moving lighting fixtures to get rid of shadows and glare; painting walls and ceilings to get more light, and many others.

If you run a war plant—large or small—the services of a G-E wartime lighting consultant are at your disposal, without charge. These men are located all over the country—ready to help you get the most from your present equipment—*ready to help you put light to work.*

Why not take advantage of this service? Call the nearest G-E lamp office and they will place a wartime lighting consultant at your disposal. Or your local electric service company or G-E lamp supplier can give you helpful advice.



*Made to
Stay Brighter
Longer*



G-E MAZDA LAMPS
GENERAL  ELECTRIC

THE OUTLOOK

Production Goal in Sight

Activity, temporarily level, will gain 10% more to mid-1943, and then flatten out. Only fractional rises seen in price indexes, but hidden boosts are mounting problem.

For five weeks business activity, as measured by the Business Week Index (page 11), has held steady between levels of 190 and 191. In the future, such temporary plateaus are to be expected more often. They reflect the inefficiencies that creep into the productive effort in a time of strain—repairs to equipment, changeovers to new war needs, letdowns because of faulty scheduling of materials and manpower. Specifically, recent drops in steel operations (off 0.2% of capacity again this week), in tank-car oil shipments (which have necessitated a new order diverting tank cars, page 50), and in lumber and woolen manufacturing have offset continued arms gains.

Ceiling Yet to Come

But, for the next few months, such plateaus will be only temporary. The nation is not yet at its production ceiling. Activity still is rising, and some of the biggest gains are yet to come in the first half of 1943. Sometime then, the Index will cross the 200 mark, and at midyear it may well run over 210. Thereafter, activity will tend to level off.

For one thing, planned expansion of capacity to produce war materials—steel, aluminum, synthetic rubber—will by then have largely been completed. Also, manpower especially, but other productive factors too, will increasingly limit output of lumber, coal, foods, and other materials. Curtailment as a policy of the War Production Board will particularly cut paper and printing operations; textiles, leather, tobacco, and other nondurable lines will be steady.

Further Contraction Likely

Broadly, this production outlook points to a further contraction of civilian supply generally. But this week's Truman committee forecast of a severe lumber shortage next year highlights the confusion as to specific materials prospects. For some lumber experts foresee a larger production and a smaller demand.

Textiles show the same contrast. Worst manufacturers last week were allocated 60% more wool for civilian fabrics in the next eight months than they have had recently. Yet recent reports in cotton goods markets have been that anywhere between 900,000,-

000 and 1,500,000,000 sq. yd. of a probable 12,000,000,000-sq.-yd. production will be preempted next year for lend-lease. This, with heavy allocations for the military and for the bag-goods program already set, would cut into supplies for consumers. Even now it is becoming harder to get sheets, towels, and pillow cases in stores.

OPA's Job Toughened

These coming cuts in supply of soft goods as well as foods (BW-Dec. 5 '42, p13) will make more difficult OPA's job of holding the retail-price line (Outlook chart). Black markets—price and ration violations—are already a reality and not just the figment of a bureaucrat's imagination. Nearly half the food stores OPA has investigated have been found to be breaking regulations.

Hence OPA's drive for uniform products, prices, and markups—of which last

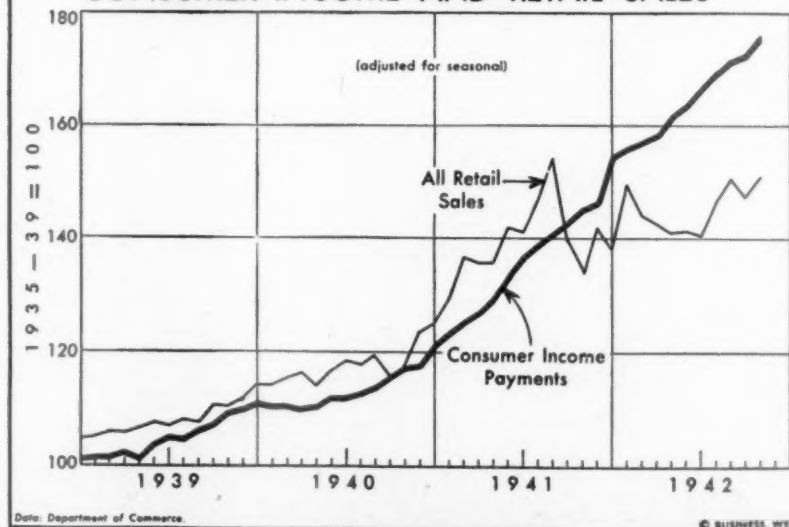
week's order standardizing beef cuts as a preliminary to standardizing prices is one example. These will facilitate consumers' own policing of the retailer. Hence OPA's renewed efforts to obtain funds for more federal enforcement.

Concealed from Indexes

These illegal price gains, of course, will not show up in official indexes of the cost of living. Many items are priced at the carefully complying big stores, and in any case, the obvious federal agent will hardly be quoted above-ceiling prices by even the least sharp-eyed seller. OPA has proved its ability to keep officially measured living costs down, once its authority was established and extended. Assuming that the present policy on price control is maintained (Washington Bulletin, page 5), it is unlikely that federal indexes of either industrial prices or living costs will advance more than 5% in the next year, even after such authorized boosts in ceilings as those granted last week to manufacturers of 17 grocery items, to compensate for higher packing costs, and those to be made to coal operators, in order to permit time-and-a-half overtime payments to labor.

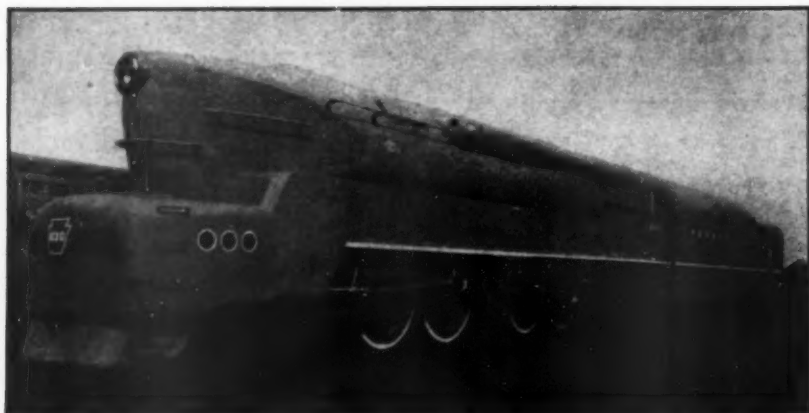
Industrial prices, particularly, have

IN THE OUTLOOK:
CONSUMER INCOME AND RETAIL SALES



Normally, retail sales move fairly closely with income, as during 1939, 1940, and most of 1941, rising or falling a bit faster on the upswing or downswing. But in late 1941 and in 1942, as civilian supply has become increasingly limited and as price controls tightened, sales tended to flatten

while income rose. The characteristic economic pressure for civilians to lift their purchases to their income levels is what threatens price and ration controls and raises the need for additional tax measures. And next year, when income payments rise 15% and sales contract 10%, this "gap" will widen.



PENNSY'S LOCOMOTIVE

Designed to avoid double-heading passenger trains in steam-operated territory, the two new Baldwin-built class T1 locomotives now doing the Penn-

sylvania's Harrisburg to Chicago run can haul an 880 ton train at 100 m.p.h. on level track. These 4-4-4 type locomotives have a tractive force of 65,000 lb., carry 19,500 gal. of water and 41 tons of coal.

been stable and now are up but 0.2% since the freeze. However, the prevention of indirect price rises presents a mounting task. Lowering of quality, discontinuance of cheaper lines and services, withdrawals of discounts and concessions, and imposition of "extras," as well as other devices have caused huge "hidden" boosts in actual, if not quoted, prices of both manufacturers and retailers. OPA already has prohibited many of these, but specific bans are often difficult to formulate.

V-8 for Victory

Ford engine for medium tanks is Army's choice, but the Allies will continue to get diesel and air-cooled engines.

Army Ordnance may not confirm its choice of a standardized engine for medium tanks until after the end of the year. By accident or design, however, hints and cryptic statements from high military sources forced the Tank-Automotive Center in Detroit to heed clamor by the press for further details. Last week, it was admitted that the Army had standardized on one engine—the Ford—for medium tanks to be supplied to American troops, but that preferences of our Allies for air-cooled and diesel engines will entail continued manufacture of these two types.

• **Quantity Production**—The Ford tank engine, a shoulder-high V-8 adaptation of the Ford liquid-cooled 12-cylinder aviation engine, has met all tests and is in quantity production; future output will be sufficient to power all 1943 model medium tanks needed

by the Armored Forces. Continental Motors will continue to make Wright air-cooled engines and General Motors its twin-diesel tank engine for installation in tanks supplied to Allied armies.

Army's choice of the Ford tank engine represents the inevitable compromise in complex engineering matters, puts new force behind a promise to provide front fighters with ideal equipment, not just quantity. Controversy over the best type of tank engine has existed within industry for over a year. At least a month ago, however, Ordnance engineers had eliminated the diesel type from future plans, in order to provide a power plant that will operate on the fuel universally available.

• **Not Firetraps**—Gas-powered engines do not make tanks into firetraps as popularly supposed. The gale-like cooling draft through the engine compartment of M3 and M4 tanks will snuff out instantaneously a Molotov cocktail thrown into the air intake. Ammunition fires are another matter; even a diesel-powered tank will burn like a torch after a direct hit.

The air-cooled engine has turned in a notable performance under battle conditions. Ordnance engineers like many of the features of this type. Standardization upon the Ford liquid-cooled power plant evidently springs from these factors: (1) The engine has passed all tests satisfactorily; (2) it is easy to service; (3) Ford can realize required production levels more quickly in the converted Lincoln plant than a competitor could increase the output of air-cooled motors; and (4) the additional horsepower supplied by the Ford engine can be used handily in realizing the Army's objective of an "ideal" medium tank.

• **Power Plant Does It**—In designing a tank, all armies seek the best balance

of firepower, mobility, and armor that circumstances will permit. American light and medium tanks are superior in armor, in mobility, and in firepower to German, Russian, and British equipment for one principal reason—power plant. The 60-ton American tank, now in production, is the most formidable model in existence, but its great size forbids its use except under limited conditions. Tank battles still will be decided in most instances by the qualities (and quantities) of the light and medium tanks engaged.

In comparison with the Reich's Mark IV tank, both the M3 and M4 medium American tanks have proved decisively superior in battle. The Germans use a 250-hp. air-cooled gasoline engine that provides speeds up to 20 m.p.h. The American tank with a 450-hp. air-cooled engine enjoys a 50% speed advantage. Most German tanks mount an old-style 75-mm. cannon that shoots only high-explosive shell; accuracy of fire while traversing rough country is a matter of luck.

• **Tactical Freedom**—American tank commanders have greater freedom in tactics, because the M4 mounts a heavy-barreled, long-snouted 75-mm. that outranges the enemy, shoots either high-explosive or armor-piercing shell, can be trained in motion with a high degree of accuracy through the medium of a secret device produced by Westinghouse.

That margin of superiority will be kept by the intensive tank development program under way. The Ford tank engine probably can produce 50% more power than the air-cooled type that it will displace, thereby permitting more speed, more armor, heavier armament, or more ammunition-carrying capacity as events prove necessary.

• **Transmission Studied**—Coupled with standardization upon one engine is the pending choice of an automatic transmission for medium tanks. Procurement in this case will be a much more difficult problem. Three designs are under consideration, but production of parts for the one chosen may be split up as an industry-wide proposition because of the manufacturing problems involved. Even so, some \$15,000,000 to \$20,000,000 of the finest precision machine tools may be required—and that is the stumbling block. Installation of an automatic transmission in medium tanks is not purely an engineer's dream. Experience with a heavy-duty G.M. Hydramatic transmission in Cadillac light tanks has been highly satisfactory. The device provides maximum maneuverability over all sorts of terrain; the tank does not lose speed at gear shifts; the Cadillac V-8 engines can't be raced and burned out. None of the three automatic transmissions under consideration is a Hydramatic, but in principle they are similar to it.

Draft Gets Down to Business

Ban on voluntary enlistments eliminates some uncertainties of war industry's manpower problem, but WMC's replacement lists and summaries will tell the final story of deferments.

Only time can tell whether last week's executive order spelling out War Manpower Commission Chairman Paul McNutt's powers and giving him control over Selective Service (BW-Dec.12'42, p15) grants enough authority or puts it in strong enough hands to permit a thoroughgoing job of manpower allocation. But an immediate and important effect of the order is clarification of the draft situation. Employers soon will be able to deal in far more orderly fashion with the drain on their labor force created by military needs for men.

• **Haphazard Losses**—Except that 1-A men, until about Feb. 1, still may volunteer for the Navy, Marines, or Coast Guard, enlistments are out, to the great relief of war goods manufacturers, many of whom have lost more men by enlistment than by the draft. Moreover, regardless of the number of men involved, losses by enlistment come in a haphazard, uncontrolled way, in contrast with the more orderly Selective Service procedures, faulty as these sometimes may be.

Reports that draftees will be given their choice of service in the Army, Navy, Coast Guard, or Marines are incorrect. Procedure for divvying up men among the services has not yet been worked out, but it certainly won't be a matter of personal choice. It will depend on many factors such as the course of the war and geography; thus, a West Coast draftee is more likely to end up in the Navy than is his eastern brother.

• **Special Calls Due?**—However, the decision on this matter is of no importance to the employer. His dealings with Selective Service and the rules on deferment are the same, no matter what service his men ultimately reach.

A less immediate effect of drafting men for the Navy is that it speeds the day of "special calls." Present procedure is for the military to tell Selective Service that it wants so many men meeting physical qualifications in a given month. It always has been recognized that it sometime might become necessary for the services to ask for so many men of a particular skill. The Navy needs more men with skills than the Army, has got them in the past by selective enlistment.

• **Procedure in Doubt**—How this will be done is still problematical. The services have not yet made up their minds on the extent to which they'll issue special calls, and WMC and Selective Service still are studying procedures that might be used to meet the

calls. Probability is that some system for picking men where they can be most easily spared will be developed rather than simply assigning quotas to local draft boards. Possibly the information collected by WMC in plant manning tables (BW-Nov.7'42,p18) will be used for this purpose.

Termination of the Hershey-McNutt squabble over manning tables is an important byproduct of the executive order, since a system for plant-wide, rather than individual, determination of occupational deferments now can be put quickly into effect.

• **Broadened by WMC**—The manning table idea was developed first by Selective Service as a way of improving the admittedly unscientific occupational deferment procedure (BW-Jul.25'42,p18). Scheme was that instead of deciding the deferment of each man as his number came up, a general schedule of deferments would be worked out for the entire personnel of a plant. The idea was taken over by the manpower people

and broadened to include a general study of the manpower policies of the plant—labor hoarding, utilization of women, training and upgrading, estimates of future needs, etc.

Clearly, however, preparation by industry of manning tables and study and approval of them by WMC is a slow, painstaking process. So Selective Service proposed an interim procedure by which the portion of the work involving draft deferment would be done first and used to guide local draft boards. WMC was dubious about this plan, fearing that if the juicy draft deferment material were isolated into a replacement schedule as proposed by SSS, employers would have no inducement to make out complete manning tables.

• **Six-Months Basis**—The executive order giving McNutt control over SSS provided WMC with assurance that it held the reins on manning tables. The plan thereupon went through on the basis that replacement schedules will be good for six months, that WMC regional offices may require completion of a manning table as a condition for renewal of the replacement schedule.

Introduction of the replacement schedule idea does two things. It provides a quick way of getting plant-wide consideration of draft deferment. And it tacitly changes the basis of occupa-



HOT PLATE

Massive rollers of a 206-inch mill have increased 1942 armor plate production at Lukens Steel Co., Coatesville, Pa., more than 400% over 1941—previ-

ously the plant's banner year. Once all armor plate over 4 inches was laboriously forged, but Lukens's process for rolling tough armor alloys up to 9½ inches thick now permits rolling 100,000-pound plates.

tional deferment. Up to now, a man has been eligible for deferment if (1) he worked in an essential industry, and (2) he held a job in that industry requiring skill and substantial training.

• **Everybody Essential**—The second part of this rule is obviously somewhat unrealistic. In most firms everyone is "essential" or he wouldn't be drawing pay. No matter how few days it takes to train replacements for some unskilled job, the plant would have to shut down for that many days if all its men in

that job were taken. This didn't matter greatly as long as most married men were, for all practical purposes, automatically deferred. The war plant could always get along on its husbands.

Now married men are subject to call. And now, under the replacement schedule plan, any man in an essential industry can be deferred for the time necessary for his orderly replacement.

• **Data Listed**—Any firm in an essential industry may prepare a replacement schedule. The WMC has listed 35 es-

sential industries (BW-Jul.25'42,p18). First step is to obtain from all employees data on: job title, age, local board number, draft number and classification, family status. Then a "replacement summary" can be prepared as shown in Form A (below). Essentially, this lists, by jobs, all employees, showing how many are: (1) women; (2) men not immediately likely to be drafted because of age, IV-F draft classification, or because they have children (children born more than nine

Using the new system developed by Selective Service, an employer can, in a very real sense, write his own ticket as far as regulating the impact of the draft on his business is concerned. The Replacement Summary shows the manning requirements of the entire plant and how the draft

will affect personnel in each job classification. The Replacement List shows the draft status of every potential selectee and the length of time that the company feels it would need to train someone to fill his job. State SSS directors must approve company reports.

SCHEDULING DEFERMENTS AND REPLACEMENTS

New Selective Service tables gear drafting of workers to rate at which new personnel can be found for whole plant.

Form A—REPLACEMENT SUMMARY.

Line No. or Code	LIST OF JOBS (Job Titles)	Number of Women	Number of Men not now to be considered for Replacement on Example - B					Number of Men to be considered for Replacement on Example - B			Total of all Workers	Anticipated Maximum Number of Workers (Optional)
			Men with Minor Children	Class 4-F	Over Age	Under Age	Total	Single Men	Married Men without Children	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13
	DETAIL MFG. DEPT. MACHINE SHOP											
	Foreman		5		2		7		1	1	8	
	Sub-Foreman		6	1	3		10	2	3	5	15	
	Leadman		19	1	9		29	6	2	8	37	
	Drill Press Opr.	42	20	5	10		61	32	41	73	211	
	Assembler "O"	824	550	69	179		231	1,553	237	294	531	2,384
	ENGINEERING DEPT. Chief Engineer				1		1				1	
	Administrative Engineer		1				1				1	
	Project Engineer		3		1		4		1	1	5	
	Stock Checker		4	1		3	8	11	8	19	27	
	TOTALS	4,515	3,403	422	1,797		1,290	11,427	1,643	1,772	3,501	14,928

Form B—REPLACEMENT LIST

Line No. or Code	Job Title	Name	Year of Birth	Sel. Ser. Class	Married or Single	Local Board No.	County	State	Order No. (opt)	We will be prepared to replace these men within the month or period checked below.											
										1st	2nd	3rd	4th	5th	6th	to 12 Mos.	Over 12 Mos.				
1	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16				
	DETAIL MFG. DEPT. MACHINE SHOP																				
1	Foreman	Smith, John E.	'04	II-B	M	-															
2	Sub-Foreman	Jones, Thomas L.	'09	III-B	S	-						✓									
3		Wilson, Jeffery B.	'12	III-A	S	-							✓								
7	Leadman	Nichols, Roger	'15	III-A	S	-				✓											
1463		Golgan, Douglas	'22	Uncl.	M	-									✓						
1464	ENGINEERING DEPT. Project Engr.	Evans, John T.	'99	III-B	M	-															
1465		Allan, B. C.	'07	II-B	S	-					✓										
1466		Martin, Chas.	'09	II-B	S	-					✓										
1467	Layout Draftsman	Park, Franklin	'09	III-A	M	-						✓									
1468		Davis, Donald E.	'14	II-B	M	-						✓									
3501	Stock Clerk	Honan, W. H.	'21	I-A	S	-				✓											
	TOTALS									167	100	100	100	150	150	1250	1484				

months after Pearl Harbor are not counted); and (3) men likely to be drafted.

Next step is preparation of a "replacement list" as shown in Form B (page 16). This is a list, by name, of those men who fall in the draftable group. For each man, the time required to replace him is indicated. This will depend not only on the time required to replace a single man by training, upgrading, or recruiting, but also on the rate at which the firm can carry on replacement.

• **Conservatism Discouraged**—Thus, in example B, it takes about three months to train a subforeman, but the firm only feels able to have two in training at one time. Hence, the schedule provides for replacing Jones in three months, Wilson in four, etc. The firm's ideas of how much training it can carry on at a time shouldn't be too conservative. For instance, a replacement schedule that spreads replacement of moderately skilled men over much more than twelve months is likely to be viewed with suspicion.

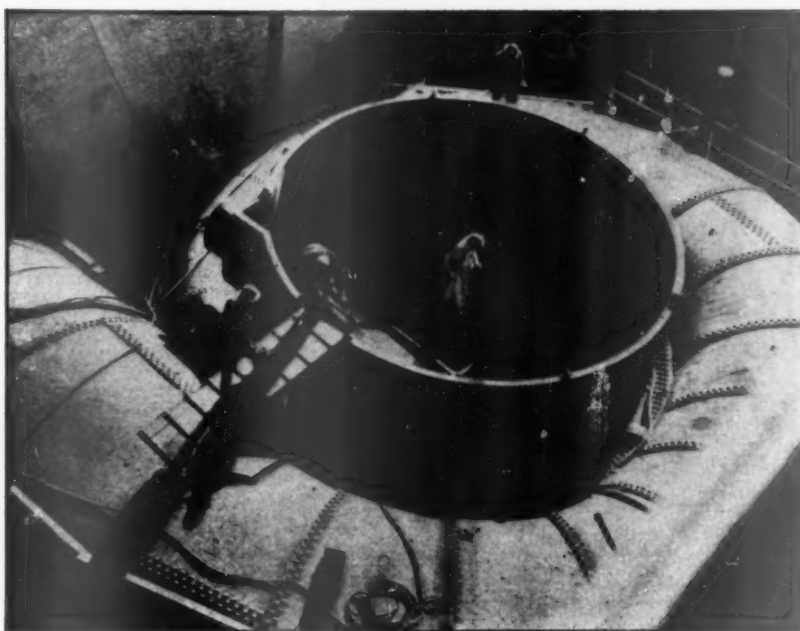
Wherever such staggered replacement arrangements are used, the order of replacement should be determined by replacing single men first, in the order of their draft order numbers, then married men according to their draft numbers (wives acquired after Pearl Harbor don't count).

• **Up to State Director**—When the two documents constituting the replacement schedule are finished, they are submitted for approval to the state director of Selective Service. The examination will be pretty cursory, limited to seeing whether the training times and replacement rates look reasonable. However, if every employer in the state dashes in with a schedule, a jam may result.

If the schedule is approved, it will be given an approval number so indicating. Then the employer should submit to the local boards a form 42A (request for class II deferment) for each of the men on his replacement list. For each man, he will request deferment until the month indicated on the approved replacement list and will include the approval number of his replacement schedule.

• **Compliance Expected**—Draft boards, legally autonomous, are not bound to grant the deferment so requested, but they are expected to do so in most cases. The replacement schedule, of course, establishes a minimum but not a maximum deferment period. Thus, in example B, subforeman John Bradon will not be drafted before the fifth month after approval of the schedule, but he may not happen to be drafted until much later.

The employer with an approved schedule should file form 42B (request for class III-B deferment) for his men who have children.



POWER POTENTIAL

First scroll case has been bolted into place in TVA's Douglas Dam, now rapidly nearing completion in eastern Tennessee. By next spring dammed up

freshets will be sent through cases to spin turbogenerators, bolstering the electric energy supply of expanding war industry, particularly the power-hungry aluminum plants in the Tennessee Valley.

Lakes' Ore Record

Battling ice to lengthen season plus diversion of grain ships to iron cargoes helped set 92,076,781-ton mark.

In the home front war of raw materials, Great Lakes shipping this week celebrated a major victory: 92,076,781 gross tons of iron ore delivered in 1942. This tonnage exceeds both early and late season goals set by the War Production Board and beats last season's record by 11,960,521 tons.

• **Next Year, More Still**—Joseph B. Eastman, Office of Defense Transportation director, congratulated his Great Lakes executive, Alexander T. Wood, in a message that said every Lakes' man and dock hand connected with this victory had done an outstanding job. Yet the 1943 job is even bigger; WPB wants 100,000,000 gross tons. On paper, the Lakes fleet can barely make it, but shippers are saying it shall be done.

In the season just ended, 340 American and Canadian ore carriers, including several boats taken from regular grain runs, had an unprecedented season that lasted 254 days. It began when the Cleveland Cliffs freighter, J. H. Sheadle, loaded the first cargo at Escanaba, Mich., on Mar. 24, and ended when the Bethlehem-operated E. Y. Townsend

unloaded at Cleveland harbor Dec. 17.

• **New Ships Will Help**—The 16 new lake vessels under construction for the Maritime Commission will be put in service next spring, although it seems unlikely that all can be ready at the beginning of navigation. They will add 6,400,000 tons to the fleet's season capacity. The five new carriers of Pittsburgh Steamship Co., U.S. Steel subsidiary, began operations this year.

Most important factor, aside from weather conditions which neither WPB nor ODT can order around, is early delivery of the new carrier vessels. With favorable weather, the fleet could deliver 100,000,000 tons next year if the new ore freighters are ready in early spring.

• **Raw Material Supply**—Although steel seems to remain in a tangle of scarcity—at least in some products—the industry now looks hopefully upon its raw materials situation.

A principal factor, of course, is iron ore, but volume of scrap deliveries is almost equally important. Although many industrialists are convinced the WPB hasn't yet produced an all-out, realistic scrap program, deliveries have been better than expected, may reach 26,000,000 tons for the year. Figures compiled by the Lake Superior Iron Ore Assn., whose members produce 85% of all American iron ore, indicate a three-months' reserve of ore in blast furnace and open hearth stock piles next Apr. 1.

• **Battle with Ice**—The hulking lake freighters, each of which may carry more

tonnage than two 100-car freight trains, did not win their victory this year without hard battling against ice on both ends of the season. During the last few weeks, zero weather was commonplace at the head of the Lakes, ore had to be thawed out in steaming sheds, and some of the final loading was little better than sludge when poured into holds. To open the season, the Sheadle bucked ice behind two harbor tugs for three days in Big Bay De Noc in order to get a 15-day head start on the 1941 opening date.

In the course of putting over the biggest shipping season in all Great Lakes' history, a number of incidental records were hung up, including:

Speed—Pittsburgh Steamship's *Leon Fraser*, one of five new 640-ft. freighters launched this year (largest on the lakes), established a speed record of 5½ days for a round trip from Conneaut, Ohio, to Duluth and return. This is now regular running time for the new giant carriers. Previous schedule was 7½ days.

Tonnage—The Canadian freighter *Lemoyne* loaded 17,082 gross tons of iron ore at Superior, Wis., on July 29, for delivery at Hamilton, Ont. It also loaded 17,775 net tons of bituminous coal at Ashtabula, Ohio, July 19, also for Hamilton.

Mileage—Hutchinson & Co., operating the freighter *L. E. Block* for Inland Steel, set a new "most mileage" record, 61,887 miles for the season in 38 trips between Lake Superior and lower Lake Michigan ports.

Coal deliveries on the Great Lakes, while not yet fully tabulated, are estimated at 49,500,000 net tons, not up to last year's record (50,269,724); limestone is estimated under 20,000,000 net tons; grain deliveries at Buffalo, up to Dec. 7, were 94,224,000 bu., compared with 118,190,000 for the same period last year.

• **Diversion of Shipping**—For the season, grain tonnage is expected to be under last year's total of 11,387,480 tons because several grain carriers were ordered into ore service for most of the season. In recent weeks, grain carriers made up considerable lost tonnage; freezing weather made it impossible to load out all waiting vessels and grain carrying was resumed by ODT order. ODT was specially concerned to supply Buffalo mills.

The upper Lake Michigan port of Escanaba, where two new ore docks are under construction, loaded 6,255,360 gross tons this season, highest since 1929. Once the most important ore loading port on the lakes, Escanaba is forging ahead under the impetus of an alternate route program (BW—Oct. 10'42 p18) to supplement the Soo canal. Marquette tonnage was below last year's, because of diversion to Escanaba, and Ashland tonnage also declined because of depleted stock piles at the beginning of the season.

• **Advance Planning Helped**—To explain how this year's thumping delivery of

iron ore was possible, Great Lakes' shippers go back to Nov. 10, 1940. On that date M. D. (Doc) Harbaugh of the Lake Superior Iron Ore Assn. stirred up a controversy with a report pointing up a 1941 ore demand of at least 75,000,000 tons from the Lake Superior region. Absolute capacity of the fleet, he figured, was 80,260,820 tons, utilizing both Canadian and American vessels. Actual tonnage in 1941 was 80,116,360 tons.

Aside from new construction and conversions, methods used these last two years to boost iron ore deliveries have included unloading on Sundays (Sunday loading had been the custom previously); use of Canadian vessels between all ports regardless of the international boundary; heavier loading of vessels; and complete cooperation of vessel operators, through the ODT and the Coal & Ore Exchange, to facilitate loading and unloading at all ports.

THE TIRE PICKUP SCORE

Purchase of "idle" tires from car owners in order to provide transportation for essential drivers has yielded close to 8,000,000 casings, the Office of Price Administration now estimates. Catch is that nearly half of those inspected to date are too far gone to be reconditioned and will have to be converted into reclaim. The rest either are usable as is or are recappable. Of the 8,000,000, 6,919,500 are in warehouses, another million in transit.



Paper Formula

WPB's newspaper advisers apply tentative brakes to the consumption of paper, using 1941 circulation base.

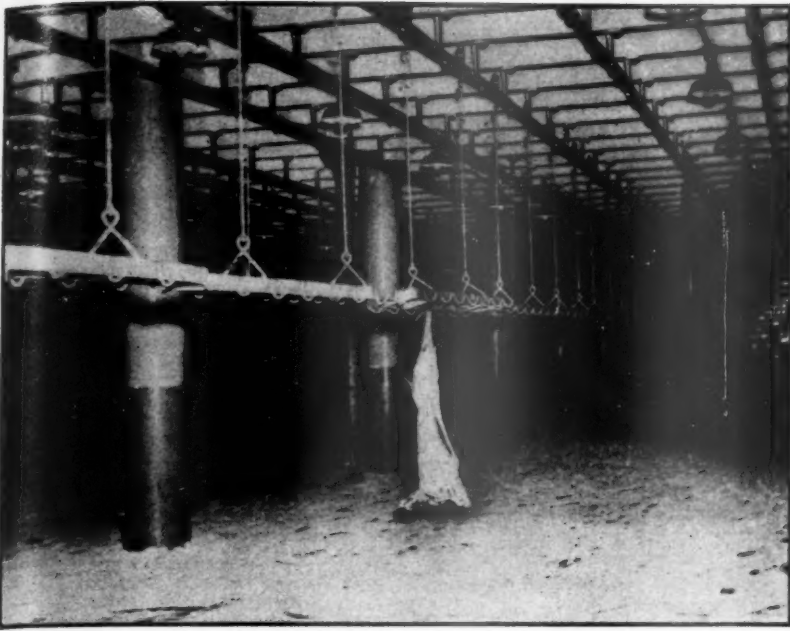
While almost universal circulation increases have given newspaper publishers a comfortable feeling this year, they may provide more than a few headaches in 1943 as supplies get tighter—notably newsprint. The first inoculation against this throb is being compounded in WPB's tentative allocation formula.

• **Inventories Will Help**—Shortages in manpower, transportation, and electricity already had produced shallow cuts in paper production (BW—Nov. 14'42, p83) when the board's Newspaper Industry Advisory Committee trotted out its crystal ball. First prediction for 1943 was a 5,000,000-cord reduction in North American pulpwood supplies.

Although that amounts to 20% less pulpwood, it hardly means an equal cut in available newsprint since publishers have been maintaining a 65-day inventory at September consumption rates. Other factors, however, make it impossible to decide how much print will be available next year (1941 production 1,058,000 tons). With 75% of our news-

260 HOMMES—0 CHEVAUX

In World War I, it was 40 men and 8 horses to a boxcar. This time it is 260 soldiers packed in a monster two-decker plywood bus, designed by Dean Gillespie, Denver engineer. The all-in-one caravan stands 15 feet high; with a White tractor it's 45 feet long. Built to seat 100 persons and stand 141 more (the Army jams in 19 more), the bus is used to transport soldiers from their barracks to the distant main gate at Camp Carson, Colo.



THE LAMB WAS SURE TO GO

And the veal, too, in Philadelphia, where meat storage rooms like that of

Consolidated Beef Co. (above) are fast emptying, and beef is not to be had. Shortage threatens to be more acute by the year's end.

print supply coming from Canada, next year's production depends upon events north of the Border, plus future deals between WPB and Canadian authorities.

• **Determined by Sales**—The formula, which Director William G. Chandler of WPB's Printing and Publishing Division hopes will obviate long-range prediction while promising equitable paper distribution, gears allocations directly to newspaper circulations. This year being one of greatly increased newspaper sales, due to war news, 1941 was chosen as the circulation base.

Under the formula, publishers would be limited to the newsprint tonnage required to produce their 1941 net paid circulations. Seasonal fluctuations in home deliveries and street sales would be covered by making the allocations quarterly (newspaper demand usually rises during winter months).

• **Small Papers Unhit**—While the newsprint distribution system appears to pinch off this year's increases, loopholes are present to permit "adjustments" on individual merits. Publications having large inventories also are in good shape for the time being, since paper on hand is not restricted.

If and when the formula is adopted, large publications that have no paper mill tie-ups will be hit hardest. Small newspapers would be virtually free of the order, because it would not be applicable to the first 25 tons of paper purchased during a quarter after the publication had complied with the 1941 consumption provisions.

Free Patents

Enemy inventive rights, seized by the government, are thrown open to industry for redelivery via armaments.

Industry is ready to take full advantage of foreign-owned patents made available by the government. About 100 applications for royalty-free licenses have been received by Alien Property Custodian Leo T. Crowley since recent announcement of arrangements for utilizing patents owned by nationals of enemy or enemy-occupied countries (BW—Dec. 12'42,p8). About 25 applications have been granted to date and the rest are in process.

• **Only the Start**—Crowley's staff believes that is just the beginning of the wave of applications they may expect when domestic concerns have had an opportunity to examine descriptions of seized patents. Lively interest in the foreign patents was shown at the Alien Property Custodian's exhibit at the National Chemical Exhibition in Chicago late last month. Numerous technicians and patent attorneys scanned patent titles, left orders for catalogs.

Catalogs may be inspected at offices of the Patent Marketing and Information Section, Field Bldg., Chicago, and the Alien Property Custodian's main office, National Press Bldg., Washington. Mail inquiries also will be handled by these

offices. Individual sections showing patent numbers and titles of vested patents or patent applications, belonging to one patent office classification, will be furnished for 10¢ each, except for nine of the largest classes (23, 74, 88, 95, 123, 178, 179, 250, 260), which are 25¢ each.

• **Patents Are Valuable**—A \$50 fee is payable at the time an application for license under a single patent is filed, plus \$5 for each additional related patent covered by the same license.

All told about 30,000 enemy patents have been seized, classified, and cataloged. Before the month is out, about 20,000 patents owned by nationals of enemy-controlled countries will have been taken over. So today the custodian controls the largest single block of patents in this country. They include some of the finest research achievements of modern science, particularly in the production of dyestuffs, plastics, pharmaceuticals, and electrical goods. In dedicating them to war against the Axis and to the reconversion of industries to peacetime operations, APC pays this tribute to Germany:

• **Control Is Permanent**—"Our principal enemy has developed over a period of many years the most important center of scientific research outside the United States; some of its inventions have great economic value. This is particularly true of the pending patent applications which represent the latest researches, kept secret until now."

These enemy patents become a permanent part of the U. S. industrial machine. The President long ago announced that control of seized patents shall not revert to enemy hands. Action by Congress or by the peace conference may affect this policy, but there seems to be a full measure of protection in APC's refusal to sell the patents or release title in any way, or to issue non-exclusive licenses for the life of the patents.

• **Monopolies Forbidden**—Administration of seized patents also is designed to prevent monopolization by American concerns. Licenses issued by APC are non-exclusive and non-assignable. Outstanding exclusive licenses to American concerns will be allowed to stand, unless issuance of other licenses is agreed upon with the present licensee, or if it is determined to be in the public interest because of restrictions on production or use.

APC will collect the royalties due, usually as per existing agreements, unless and until one or more additional licenses are issued. The exclusive licensee under an enemy patent may elect, however, to relinquish his sole right and accept a non-exclusive royalty-free license. One American concern—a munitions manufacturer—has already done so and thereby saved a large sum of money.

• **Postwar Royalties**—Licenses on patents owned by nationals of enemy-occupied

countries will be issued on essentially the same terms as those for enemy patents. Licenses, however, will be royalty-free only for the duration of the war and six months thereafter. After the emergency, royalties will be charged on the basis of prevailing commercial practice. Postwar royalties may be determined at the time the license is issued or left for subsequent adjustment. Where American citizens hold non-exclusive licenses, APC will issue additional licenses, upon application, for the life of the patent. Such new licenses will carry the same terms as outstanding licenses.

Patent applications will be handled in the same manner as patents. APC will prosecute applications so that patents may be issued and licenses granted to American concerns.

• **Books Also Seized**—Active exploitation is expected by APC of concerns to which licenses are issued. In placing foreign patents at the service of industry APC does so with the hope research work will be continued for improvement of these inventions.

In addition to throwing open foreign patents for the use of U. S. industry, APC is engaging in a program of republi-

cation of foreign scientific and technical works. In this it has enlisted the aid of an advisory committee of scientists and librarians headed by Dr. Luther H. Evans of the Library of Congress. One book thus made available is Beilstein's Handbook of Organic Chemistry in 49 volumes. Republished by Edwards Brothers of Ann Arbor, the cost will be \$400 (the German edition costs \$1,800).

• **Suggestions Wanted**—Another book republished by authority of APC is Prof. J. Peter's Seven Place Values of Trigonometric Functions. A list of titles now owned by APC will be published soon.

Scholars, librarians, and publishers are urged to submit suggestions for works that merit translation and republication. The Office of Scientific Research and Development, headed by Dr. Irvin S. Stewart, now is translating several works on aviation, medicine, oceanography, gas warfare, and air warfare.

Gourmets' Plight

Sad to tell, the supply of squabs is short; birds on plates of celebrants at Christmas and New Year will be few.

The toothsome squab makes a most elegant addition to the list of meat "extenders" (BW—Nov. 21 '42, p. 36)—but don't count on rolling too many of these dainty morsels over your tongue. Bluntly, the supply is short.

• **Small Growers Quit**—Many a suburbanite who used to augment his income by raising squabs on the side has sold his Kings or Carneaux—best breeds for squabbing—and gone off to the Army or a full-time defense job. And, according to the American Pigeon Journal, these part-time growers normally furnish at least half of the 8,000,000 squabs that annually grace the tables of hotels, steamship lines, and high-grade restaurants. Commission merchants complain that even now, at the beginning of the squab-eating season, storage stocks are unusually small, day-to-day receipts very light.

So this year the burden of supplying the traditional New Year's Eve squab devolves upon commercial growers, most of whom are concentrated on the East and West Coasts. Biggest eastern plants are Dyer & Davis of Newfield, N. J., and Palmetto Pigeon Plant of Sumter, S. C. Each maintains about 20,000 squab-producing pigeons.

• **More Sport Than Meat**—You can discount those roof-top pens perched over the streets in New York, Chicago, and other large cities. Most of them belong to pigeon fanciers who maintain comparatively few birds as a hobby or for sport.



RIDIN' HIGH

Uncomfortable but space-saving are non-priority wooden perches in an experimental Chicago bus. The 55 stand-seats, 6½ inches deep, replace 36 standard chairs.

California's mild climate is ideal for squab raising, and growers there not only supply the local market but also pool their birds and ship them to New York—where prices are consistently 2¢ to 5¢ a lb. higher than in any other market. (Philadelphia, Chicago, and Detroit markets rank next, in that order.) Last August Army and Navy buying shoved California prices up to 48¢ a lb.—highest for the off-season in several years, and higher at that time than New York prices.

• **Competitive Prices**—Though still not a poor man's dish, squab at least begins to compare favorably with turkey this year, because turkey prices are up while squab prices are about the same as last year's. Dealers expect that temporary price ceilings will fix the wholesale price at about 60¢ a pound for the current holiday season.

Raising squabs is no get-rich-quick business, despite the high prices paid and the prolific tendencies of pigeons. A hen will produce twelve squabs a year, on the average, but since pigeons are strictly monogamous, the breeder must house and feed as many males as females.

• **Growing for Market**—The young birds are confined in cages too small to permit them to fly and are fed on grain—hence their tenderness and superior flavor. Breeders try to produce squabs that weigh a pound apiece at the marketing age of four weeks, although some markets prefer squabs weighing nine, ten, or eleven pounds to the dozen.

Unfortunately, pigeons are most productive during the summer months when the demand for squabs is lightest

IMPORTANT PATENTS CONTROLLED BY APC

Hydraulic turbines for water power plants.

Manufacture of acetylene gas from natural gas without the use of calcium carbide.

Improved processes for making rayon.

Slacks for women that adjust to various hip sizes. (Good for factories furnishing uniforms to many women.)

Blackout lamp, covering of which won't wear off and which conserves electric current.

Synthetic shellac. (Important because raw materials for shellac are no longer available.)

Magnesium fabrication.

Aluminum fabrication.

Waterproofing of cloth that makes material last longer.

Reclaiming of metal files by a chemical process used for sharpening them.

Improved coal mining machinery. Synthetic hormones.

Quick-freezing process for fruit juices.

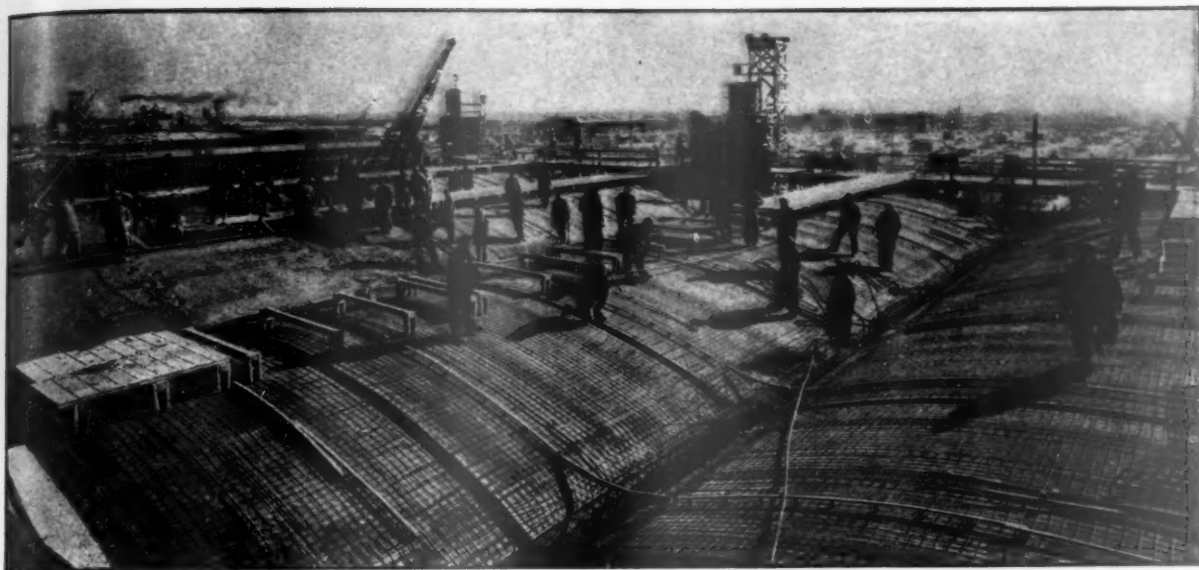
Hosiery knitting machinery.

Sensitization of blueprint paper—bring black line images.

Improved cleaning materials, non-lathering soaps.

Stretching mechanism for metal on airplane wings.

Improved magnetic alloys.



CONCRETE MIRACLE

From a welter of wood-steel forms rises Chrysler's Dodge Chicago plant,

"largest in the world" claimant. It's destined for mass production of plane engines. The main structure, one of 15 on the midwest site, will cover 22

acres. The arch-rib concrete construction is used throughout to save critical steel (BW—Jun.13'42,p69). The current work crew exceeds 17,000.

and prices are lowest. Fully half of the squabs marketed throughout the country are eaten over Christmas and New Year's. Jewish holidays also bring about heavy squab buying.

• **A Typical Food Bill**—The Watertown (Wis.) Squab Co.—a typical medium-sized plant producing about 60,000 squabs annually for midwestern markets—last year had 4,000 pairs of pigeons. These ate about \$7,000 worth of peas, corn, kaffir corn, hemp, wheat, millet, and vetch—a mixture that costs \$3 a cwt. delivered by the truckload. The feed cost is estimated at \$1.35 per pair per year.

Greatest enemy of Watertown's squabs is mink. Last year a single mink raid cost the company 432 squabs—all that were penned separately waiting to be dressed next day preparatory to being taken to market.

BATTLE OF LITTLE BOOKS

The battle of the little books has turned in favor of Pocket Books, Inc., pioneer in the 25¢ reprint field. An injunction has been granted against Avon Pocket-Size books by the Appellate Division of the New York State Supreme Court which found Avon guilty of unfair competition.

Pocket Books first brought suit last January (BW—Jan.10'42,p28), lost the first round in the State Supreme Court, and promptly appealed the case.

The appellate court held that Avon had intentionally appropriated Pocket Books' style and format "for the purpose of capitalizing on plaintiff's initiative and goodwill."

Business Boswells

National association of public relations men projected during N.A.M. meeting to lift activity to a professional plane.

Public relations circles were buzzing last week with plans for a national association of public relations men. The project, still in the embryonic stage, is an outgrowth of a meeting in New York earlier this month, which was held as a side show to the annual convention of the National Assn. of Manufacturers.

• **Talked Shop**—Despite some official emphasis laid there on how public relations men can help forward the N.A.M.'s long-standing campaign for the free enterprise system, the delegates showed unmistakable preference for talking pure shop in the form of public relations techniques and how to make them most effective.

The only sizable professional society operating in the entire field is probably the Public Relations Clinic of Chicago, which is ten years old and includes 35 men who head up national or midwestern public relations activities for a number of well-known corporations. The projected national association may be set up with local chapters in major cities, on lines similar to the organizational plan of the National Assn. of Industrial Advertisers.

• **For a Higher Plane**—"Public relations" may mean anything from Holly-


wood press-agentry to far-visioned business statesmanship. Men in charge of the long-pull programs of major corporations are keenly sensitive about the uneven texture of so-called public relations work, consider it high time that something be done to get their profession on a higher plane of activity and effectiveness.

The New York meeting was a major step in this direction. Admittance was by invitation only, and the invitations were confined to big-leaguers. The session was sponsored by the Public Relations Advisory Group of the N.A.M. and was spark-plugged by Paul Garrett, public relations vice president of General Motors Corp. Eventually, close to 150 top-flight public relations men paid their \$24 to attend two days of clinic sessions that lasted from 10 a.m. until time to dash for the commuter's last train.

• **Depth Probed**—Unavoidable conclusion of those in attendance was that public relations cannot be considered merely in terms of dealing with newspaper reporters and magazine correspondents. Rather, it inevitably reaches far back into labor relations, governmental relations, and intercompany relations.

The opportunity for achieving better understanding of corporate rights and responsibilities among workers and general public was emphasized by Dr. Claude Robinson, president of Opinion Research Corp., who outlined some survey findings. By his survey, Americans predominantly believe that business is entitled to a return of 6% to 10% on its investment, but shy at the same

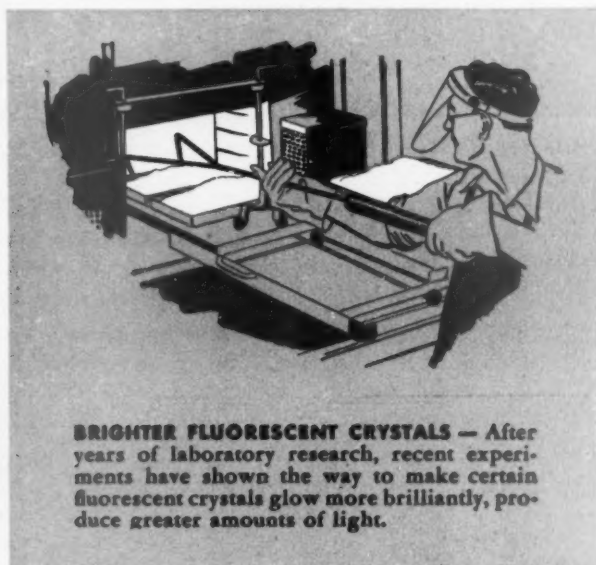
BRIGHTER LIGHT



Right now, when war plants need and are using more and better illumination to help speed production, costs of Westinghouse Mazda Fluorescent Lamps are the lowest in history. Through intelligent research and the development of mass production machinery, Westinghouse has reduced prices, increased lamp brightness and added extra hours to the life of Westinghouse Mazda Fluorescent Lamps.

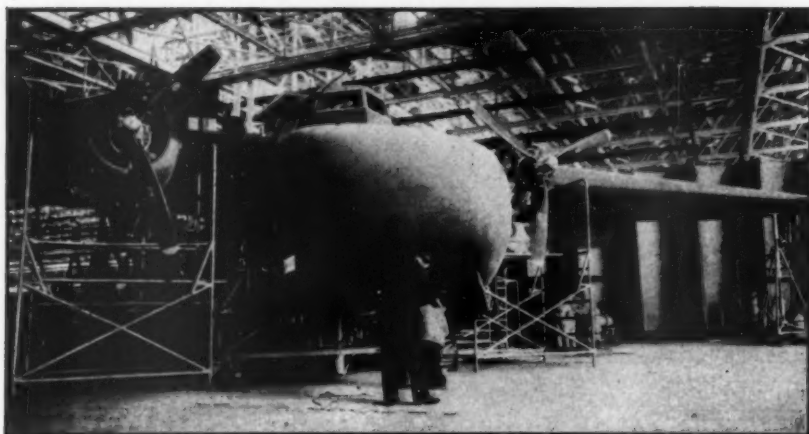
It's WESTINGHOUSE for better light at lower cost

for life!



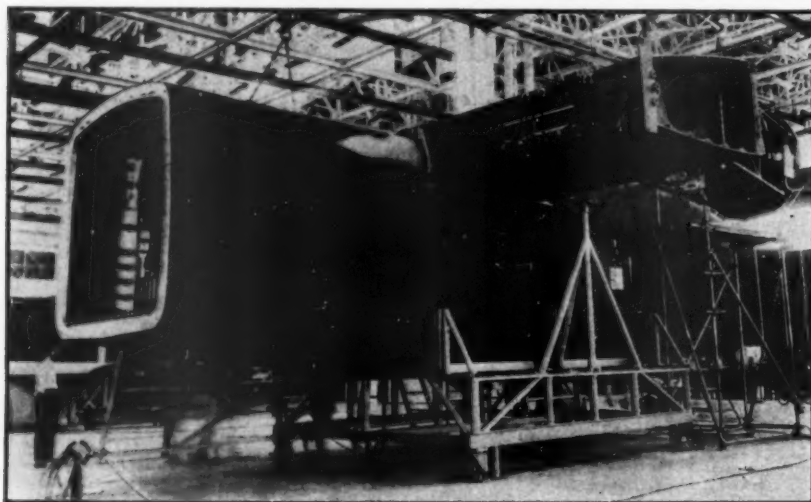
MEASURED MERCURY—Long life and low cc of Westinghouse Lamps are not due only to laboratory research but to manufacturing developments as well. For example, lamp making machines are equipped with mercury dosers which measure the exact amount of mercury and inject it into each lamp faster and more accurately than ever before.

Westinghouse
MAZDA
FLUORESCENT LAMPS
for Greater SEE-ABILITY



Ready for flight tests, the Curtiss (C-76) Caravan is the first giant transport of this war to be built almost entirely of wood and other noncritical materials. Molded plywood, laminate, and wood production is 65% subcon-

tracted. Twin 1,200-hp. engines power the 68-ft. full (108-ft. wing span), and, with its bulbous nose and other features, the ship is suited for slow-speed landings in difficult terrain. Higgins's contract calls for similar ships.



return when it is expressed in terms of dollars of annual earnings by a big company.

• **Interpretations Vary**—A few of those present concluded that this means financial headline writers should be urged always to use percentages. Longer-headed public relations men interpreted the same facts as meaning that business must educate the public to such elementary economic realities as the necessity for profits big enough not only for dividends but also for plowing money back into invested capital.

Another problem that drew a lot of discussion was how to get top management to backstop the public relations department with the recognition its function must have if it is to do a really effective job. Platform speakers and luncheon conversations left no room for doubt that a public relations program gets real results for its company only when executive officers comprehend its importance, temper their management

decisions with a thought for how these may influence public and employee opinion of the corporation.

• **Wartime Policy**—High point of the meeting was a round-table discussion, "What part should public relations play in management policy during the war?" Discussion was guided by Town Hall Moderator George V. Denny, Jr., and participated in by five big company heads: James S. Adams of Standard Brands, Lewis H. Brown of Johns-Manville, Colby M. Chester of General Foods, James F. Lincoln of Lincoln Electric, and Cloud Wampler of Carrier Corp.

CONTINUOUS BLEACH

The same hydrogen peroxide that enables ersatz blondes to achieve their crowning glory has been put to work by E. I. du Pont de Nemours & Co. in a new continuous bleaching process that turns cloth white in two hours

at rates up to 200 yd. per min. Textile mills in seven states are using or installing the process for the manufacture of cotton goods for soldiers' and nurses' uniforms, for shirts, sheets, towels, handkerchiefs, and other military end products.

Du Pont claims for the process precision control of speed, steam, chemical absorption, and other factors. Application of production-line methods eliminates bottlenecks in the cutting, packing, and shipping rooms; "seconds" and "rejects" are reduced to a minimum.

Higgins Takes Off

But his order for cargo planes was warmed up by the President after military air experts grounded it.

Higgins's contract for 1,200 cargo planes does not represent an Army commitment to a super-air-cargo program. Quite the contrary, pressure for servicing the war by air has collapsed.

• **Army Opposed**—The Army opposed both Kaiser's and Higgins's freight plane proposals, and the Navy has lopped off its program the huge Nash-Kelvinator contract for a fleet of Sikorsky's (BW—Dec. 5'42, p7).

Army air officers never warmed up to the Higgins deal. President Roosevelt put it down their throats, partly because he was sold on the dynamic boat builder, partly because he wanted to make use of the abandoned Higgins shipyard, which was to have built 200 Liberty vessels at New Orleans.

• **No Metals Involved**—Higgins will build a design similar to the Curtis C-76. A tested cargo plane, already accepted by the Army, it will be almost entirely of plastic-impregnated wood. Neither the Army nor WPB would have consented to the use of steel and aluminum.

As it is, the Army dislikes prospects of having to furnish 2,400 engines, plus spares, for Higgins's project. Higgins hopes to build his own engines, but expert opinion and the record of engine development are all against him.

• **A Juicy Contract**—Of course, Higgins can still lose his contract if he fails to deliver planes that meet the approval and the speed schedule of the Army. But this contract is not monkey business. It adds up to about \$200,000,000, including \$23,000,000 for plant and machinery. (And it can give Higgins plane-building experience that he might be able to turn to good account after the war.)

The C-76 is about the size of the DC-3 on the airlines, with two engines, four- or five-ton load, and short range, not suited to overseas operations.



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Because of that leadership, our trademark has, on occasion, been improperly used as descriptive of all small precision snap-action switches. Certain editorial writers and catalog compilers have erroneously employed MICRO SWITCH to identify a type of switch. These people have cooperated fully when this fact was brought to their attention. Some users have accepted a competitive product in the belief they were purchasing MICRO SWITCH.

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If you manufacture a product which involves precise control, we will be glad to send your engineers as many copies of our Handbook-Catalogs as you may desire.



We are proud of the dependable performance, the durability, precise accuracy which we have been able to build in MICRO SWITCH. We are proud of the accepted leadership it has won throughout industry. Our engineers work unceasingly to adapt MICRO SWITCH to the many new applications which unfold each day, including those designed for the postwar period.

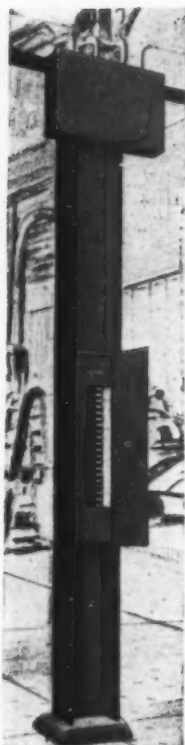
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Built of standardized units, the FA Column Type Panelboard affords automatic protection against sustained overload, and prevents interruption of service from momentary overload. In the case of a short circuit, or sustained overload, service is quickly restored (after the cause has been removed) simply by moving the handle to the ON position.

Furnished for either single-phase, 3-wire, 115/230 volt or three phase, 4-wire 120/208 volt solid neutral service—with 4 to 42 single-pole branch circuits.

Ask for Bulletin No. 62

(Illustrated at left: Cat. No. NACIBC-3L10—
Column Type Panelboard with
Wire Duct and Pullbox)



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Shipments of parts from manufacturer to assembler, shipments of complete war machines to far corners of the world are now moving more promptly, more safely because Protek-Sorb is on guard—eliminating the cause of corrosion, rust and mildew—saving vital materials from damage—saving time by replacing out-dated, time-wasting methods of preventing moisture damage. Upon delivery—items guarded by Protek-Sorb are clean, ready for instant ACTION! . . . Use of Protek-Sorb is a factor in Production, Conservation and Delivery—a force in speeding "V" day—an education in post-war shipping and storing practice.

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Alcohol Tilt Due

Farm bloc may be backed by gas-starved motorists in the Gillette committee's fight for more rubber from grain alcohol.

With an impressive record behind it, the subcommittee of the Senate Agriculture Committee headed by Senator Guy M. Gillette is resuming its high-powered campaign for more rubber from grain alcohol (BW—Aug. 1 '42, p. 7). Its chances for still further successes are very good. National gasoline rationing has added to the strength of the farm bloc (which sees synthetic rubber as a new market for grain surpluses and a new industry for the grain states) the powerful potential pressure of millions of motorists who look upon more rubber as more gasoline.

• **Engineering a Shift**—By arraying new facts about alcohol and rubber production delays and alleged discrimination in favor of the "industrial alcohol and oil industry combine," the Gillette committee intends to force either an outright expansion of the rubber program in the grain states—or a further shift of the present program toward grain.

The Gillette committee already has been extraordinarily effective in gaining its ends, partly because the rubber and alcohol programs were so badly blundered, but largely through expert manipulation of the facts. A year ago, grain alcohol had virtually no part in the war-alcohol production program. Only 20,000,000 bu. of substandard Commodity Credit Corp. grain were to be used for alcohol, accounting for about 10% of then-estimated alcohol requirements. No rubber whatever was then scheduled to be produced from grain alcohol.

• **Results in Two Months**—Within two months after the Gillette committee went to work, in March, the War Production Board and the Rubber Reserve Corp. capitulated, announcing in May an expanded alcohol program to utilize 136,000,000 bu. of grain in converted whisky distilleries and industrial alcohol plants, and a 200,000-ton rubber-from-alcohol program. The grilling given the WPB representatives of the "industrial alcohol and oil industry combine" was historic.

Six months ago, the Gillette committee introduced a bill to set up an independent rubber-alcohol authority to develop a synthetic rubber industry based on farm and forest products. It was largely to head off this threat to Presidential authority that Roosevelt appointed the Baruch Committee. The Baruch Committee (BW—Sep. 19 '42, p. 15) nevertheless promptly recommended an independent rubber agency, a 100,000,000-gal. alcohol plant, and a

30,000-ton rubber plant in the grain belt—and national gasoline rationing. About the only things the Baruch Committee did not do to help the Gillette committee was include alcohol in the "independent" agency and make it responsible to Congress.

• **Still Not Satisfied**—The Gillette committee was not entirely appeased by the Baruch report; nor is it at all satisfied by the progress made to date by Rubber Director Jeffers and the WPB Alcohol Division in "bulling through" the Baruch recommendations. Already on record is Jeffers's admission that the rubber program is now behind the Baruch schedule and that anticipated further delays may deplete our rubber supply below the danger line. To be developed are charges that the Alcohol Division failed to secure maximum alcohol production from existing plants and has delayed in getting the authorized additional facilities under way in the grain belt.

With both rubber and alcohol production expected to fall below requirements in 1943 despite all warnings, the Gillette committee will be able to make its standard recommendation even more forcefully than before—that the job would be done better, quicker, and cheaper if turned over to the farmers.

• **Jeffers's Cotton Stand**—Jeffers's previous run-in with the farm bloc over rayon vs. cotton for tires (BW—Oct. 31 '42, p. 19) gained him no friends among senatorial farmers, but Jeffers is apt to get off better than the Alcohol Division. Although the earlier Gillette investigation did result in a change of faces, the Alcohol Division still is staffed almost entirely with industrial alcohol people, a turn of affairs that can be damning in the expert hands of the Gillette committee.

Moreover, the Alcohol Division is only now authorizing plant construction in the grain belt, although the Baruch judgment was handed down in September and the handwriting was on the wall long before that. Furthermore the Gillette committee may be expected to exploit testimony that the Alcohol Division has not even succeeded in meeting its own pre-Baruch schedules of production.

• **Conversion Lags**—The conversion of the industrial alcohol plants from molasses to grain alcohol production, scheduled to be completed by the first of the year when the committee last met, will not actually be finished until next summer. And, although the whisky industry is now going full blast on war production, it is not yet fully converted to alcohol production as it was scheduled to be on Nov. 1.

Most of the distilleries are still producing only high wines—distilled spirits of high alcoholic content, but not high enough for use as industrial alcohol in the rubber program. According to schedule, most of these distilleries were expected by this time to have improved their distilling operations to a point

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INTERNATIONAL SCREW COMPANY
Detroit, Michigan

THE LAMSON & SESSIONS COMPANY
Cleveland, Ohio

THE NATIONAL SCREW & MFG. CO.
Cleveland, Ohio

NEW ENGLAND SCREW COMPANY
Keene, New Hampshire

THE CHARLES PARKER COMPANY
Meriden, Connecticut

PARKER-KALON CORPORATION
New York, New York

PAWTUCKET SCREW COMPANY
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PHEOLL MANUFACTURING COMPANY
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where they would be able to produce the top-grade of alcohol that is required.

• **Cars Tied Up**—As things stand, they must send their high wines to industrial alcohol producers for redistillation, thus tying up vitally needed tank cars. As a consequence, the industrial alcohol industry's output is virtually no larger than that of the distilling industry, as its capacity is absorbed by redistillation work.

The loss of alcohol production and the increased expense due to the slowness of the alcohol conversion program give the farm bloc a powerful argument for more voice in the administration of the program and more production in the grain belt to make up the loss.

Air Cargo Soars

Experts outline limitations and advantages of planes for freighting; lines see new cargo ships by summer.

Postwar air cargo transportation held for two days last week the undivided attention of what was probably the heaviest brainpower ever concentrated on the problem. Occasion was a meeting of the Society of Automotive Engineers. It drew to Chicago practically all of the air lines' specialists on operating, cargo traffic, and engineering research in addition to a wealth of engineering talent from the aircraft industry.

Few crackpots and orey-eyed enthusiasts were heard as speakers or overheard in the hallways. Consensus of the S.A.E. experts was a set of moderate, well-balanced prophecies that would neither make the air-cargo evangelists dance in the streets nor make gooseflesh creep up the spines of railroad stockholders.

• **Their Opinions**—Outstanding conclusions of the assembled pundits:

(1) No single type of plane will handle the entire job of carrying air cargo, and no one system will solve all of the problems in this field.

(2) In the immediate postwar period, the air lines will operate combination passenger-cargo planes substantially larger than the DC-3's now standard, keep this up until air cargo develops sufficient volume to let all-cargo planes pay their way.

(3) No nation-wide system of air cargo routes is likely to spring into existence. Instead, all-cargo planes will be put on those established airlines which can furnish profitable traffic.

(4) Many ships now in military use will probably be available for postwar commercial service and may be converted as a stopgap measure, but ultimately all-cargo ships of special design will supplant them by providing lower ton-mile cost.

(5) In U.S. and other countries with

The Army's rubber cow has a deadly tail

THERE'S only one reason for a barrage balloon: to put a slender thread of steel a mile and a half up in the sky.

The wisp of steel is invisible at night. It can trip up an enemy bomber, diving at two to three hundred miles an hour, and send it to destruction.

Actually, that cable, the deadly tail of the balloon, is *slimmer than a lead pencil*.

But it's strong enough to hold fast when angry gales toss the balloon in the clouds. It's tough enough to stand the strain of raising and lowering the "rubber cow" several times a day... of hauling it down at 1200 feet per minute.

Hold a piece of this cable in your hand and you wouldn't believe it could do such a job. But the skill of America's steelmakers was equal to the task. Delicate strands of special steel are cunningly twisted into a light cable that has a tensile strength of thousands of pounds.

Special steel for helmets is another product supplied by United States Steel to our armed forces. Steel so strong it can stop a .45 bullet at close range. Another invention of U. S. Steel is a method of making bombs *10 times as fast as ever before*.

All this is the direct result of the constant peacetime research in United States Steel's 174 laboratory organizations. But the efforts being devoted by these scientists right now towards winning the war promise amazing benefits for America after the war.

Steel will be ready to help rebuild the world of the future with products undreamed of before.



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United States Steel Export Co., Export Distributors

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It's all right to think of Maine as "tops" in vacation land. But don't stop there. Maine has industrial advantages for busy manufacturers which cannot be matched anywhere else.

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Power is another reason. There's plenty of it, and it's economical. Maine is overnight from the heart of the Eastern markets—by rail or road. Abundant natural resources, including pure processing water. Taxation is just.

Whether you are interested in a plant or a business site—write for the free book about Maine. . . . Address the Maine Development Commission, Room 12-B, State House, Augusta, Maine.



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THIS
FREE BOOK



established railroad systems, backbone of air cargo business will be all first-class mail, all railway express, and the cream of less-than-carload freight. Where no railroads exist, as in undeveloped areas of Latin America, practically all cargoes can move by air more cheaply than by building railroads over difficult terrain.

• **Problems of Design**—Neither DC-3's nor converted military planes for all-cargo hauling got too many good words from the experts. The ideal air freighter needs adequate loading doors and hatches, and internal equipment for securing cargo without heavy deadweight dunnage. Strengthening the floors of existing planes to sustain cargo load adds weight that can be avoided in design of all-cargo ships. This leads some authorities to forecast that special strong-floor planes will be built to handle the 10% of present air cargo that is really heavy, leaving the 90% that is lightweight to be hauled in planes of lighter design.

Floors that slant during loading are a pain in any cargo ship. Ideal cargo type, said S.A.E. speakers, is a high-wing two-motored job with tricycle landing gear and low fuselage giving low lifts between floor and ground.

• **Competitive Picture.** Airlines expect to operate the all-cargo planes of the future, as well as the passenger-cargo planes. They admit that companies carrying cargo exclusively—corresponding to highway motor truck carriers—might develop, but feel sure that with already-established traffic departments, maintenance crews, and operating setups this kind of competition would be not too hard to lick.

For short hauls, the engineers were impressed with the possibility of using gliders. But they discount rosy dreams of long glider trains; unless gliders are to be dropped off for intermediate stops, it is still more economical to put all the cargo in one plane flying under its own power.

• **Glider's Advantage**—Auxiliary advantage of the glider is that it can land in a smaller area than an airplane of equal capacity; hence airports too small for huge transports might accommodate glider pickup service. Air pickup service, such as All American Aviation, Inc., uses between smallish cities in Pennsylvania and West Virginia (BW—Aug. 31'40, p22), also got some kind words from the assembled authorities.

While the S.A.E. experts were giving the theories a once-over, American Airlines was actually initiating an "if and when" cargo service between Fort Worth and Los Angeles. Not a scheduled flight, this run began Dec. 9, operates when equipment is available and a full load is in hand.

• **Transcontinental Plan Frozen**—On the same contingency hangs A.A.'s ambition to establish an all-cargo transcontinental schedule via its southern route. Lack of



AIRPLANE RIVET POPPERS

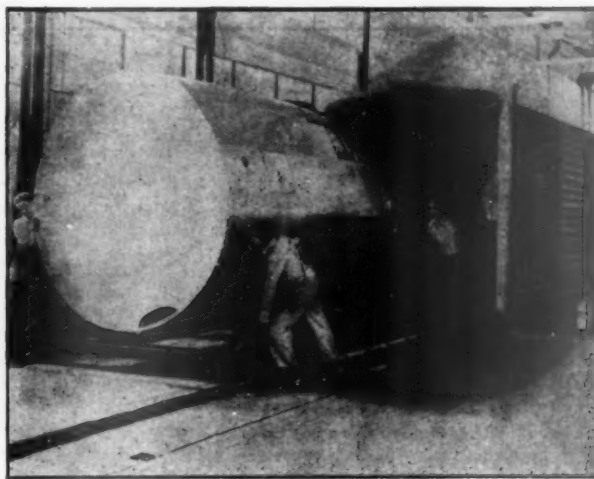
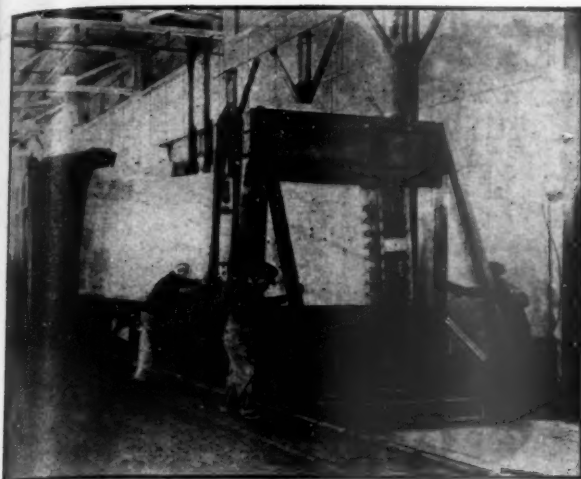
Sixteen months ago Du Pont brought out explosive rivets with small powder charges in their shanks, which pop off when heated and set them securely in hard-to-reach parts of airplanes (BW—Jul. 19'41, p52). Now Westinghouse is producing batteries of the "rivet guns" that do the popping. Into them go heating elements normally used in stoves and thermostats.

equipment has frozen this plan short of even the tentative-schedule stage, which the Fort Worth-Los Angeles run has reached.

All-cargo schedules are not new in U. S. air transport, neither are they old-hat. United started flying a mail-and-express night plane from New York to Chicago in December 1940, discontinued it six months later because passenger business even then was swamping the ticket offices. Maximum payload is easier to achieve by piling on mail and express to supplement passenger weight up to the plane's safe operating capacity, but when an all-cargo trip runs light, there is no way to fill it out. Now, of course, there is no lack of lading, though air express is more plentiful westbound than east-bound.

United initiated a new, overnight all-cargo trip, began operation Nov. 1. This trip leaves New York just before midnight on the heels of a passenger flight, ends up next afternoon at Salt Lake City 49 minutes ahead of the companion ship. The interval permits breaking up the cargo for distribution to passenger planes over the three airways forking off at Salt Lake—to Los Angeles, San Francisco, and Portland-Seattle.

• **War Plant Shuttle**—Eastern Air Lines has had a New York-Miami all-cargo trip



STEADY FLOW

Freight lines feeding Glenn Martin's new Midwest bomber plant are literal conveyor belts providing an even sup-

ply of parts from distant points, the nearest 750 miles. Problem of establishing uninterrupted stream of undamaged goods has been solved by the plant and Burlington Railroad engi-

neers who raised box car roofs to accommodate plane wing sections, designed special rolling cradles to eliminate crating and uncrating. Both parties report the system clicking.

for several months, with stops at Washington and Jacksonville. The transcontinental lines carry express shipments principally from one war-industry plant to another, but the North-South cargo haul is largely military goods and other shipments destined for Latin America.

The airlines are getting so much express cargo that at times they find it hard to handle. Air cargo chiefs of the big four airlines—American, Eastern, Transcontinental & Western, and United, carrying 80% to 90% of U. S. air express—are resigned to telephone calls in the small hours begging them to pull a shipment off a train and get it on a plane with top priority.

• **Two Flights Snagged**—Prize emergency in this class involved 10,000 lb. of express. The airline had to toss off all the passengers on two of its transcontinental flights to meet this crisis.

All of this activity shows in the statistics. With about half as many transports in commercial service as a year ago, volume is tremendously higher. Last month, for instance, United's express pound-miles were up 145%, mail pound-miles up 106%.

Air transport executives thought three years ago that they were about to get new four-motored passenger equipment. They planned then to convert some old two-motored equipment to all-cargo use. But the Army took all their big ships before completion.

• **More Next Summer?**—Now the big airlines are hopeful of getting a few new cargo ships by, say, next summer. They reason that by then their cargo traffic may exceed the aggregate capacity of the cargo pits of their present equipment.

The Army, meanwhile, is receiving huge quantities of new transport planes, including the twin-engined 20-ton Cur-

tiss-Wright Commando (BW—Jun. 6 '42, p18), and airlines hope that by next summer the Army will be able to spare a dozen or two without feeling the loss. Pay load capacity of a DC-3 for 800-mi. range is about 5,000 lb., and for one of the best of the Army cargo ships is about 16,000 lb. The cost advantage for full loads is obvious. Commercial lines point out that, given a few such ships to operate, they could likewise train Army pilots in the tricks of transport flying.

• **Charges May Drop**—When the commercial operators receive any sizable lot of new equipment, it seems a safe bet that they will reduce their express charges and perhaps resume the experiments with commodity rates that Pearl Harbor interrupted. Tariffs for less-than-carload railway freight shipments, according to the airline statisticians, average 3½¢ to 5½¢ per ton-mile, for railway express 10¢ to 17¢, for air express 86¢. This rate structure leaves a clear opening through which the airlines can drive ahead.

Air Cargo, Inc., set up last year by the four largest airlines (BW—Mar. 22 '41, p20), is still a research organization. Its study covers all phases of air cargo to improve service and lower charges, thus stimulating greater volume for the postwar years. One idea that is being considered is interline exchange of equipment, with the possibility of Air Cargo, Inc., becoming an operating company.

• **Skytruck Studies**—Other ideas are getting a play, including such gadgets as the "skytruck." This is a device, still in the mockup stage, developed by Harlan D. Fowler, inventor of the widely used Fowler flap. Fowler's skytruck is an airplane with its fuselage consisting

of five boxes, much like the boxes developed for interchange between motor trucks and railway flatcars. The fuselage is built up of the boxes, which can be demounted and swapped at regular stops. They can be carried intact on trucks to consignees or to central distributing points.

Air cargo news was made last month by W. A. Patterson, United's president, in a speech before the National Industrial Conference Board. Advocates of big-scale air-freighting insist that after the war the airplane will run the railroads and steamships out of business. Patterson argued that wartime air-freighting is irrelevant because it ignores costs, as postwar operations cannot, and that domestic air cargo could increase a hundredfold and yet capture only 1% of the freight ton-miles of U. S. railroads.

• **Costs Compared**—His comparative cost figures showed that a freight train can deliver 1,560 tons between Chicago and San Francisco at a total cost of \$50,000 for two round trips in a month, whereas it would require 57 DC-3 planes, each doing the work of three freight cars, to carry the same cargo between these terminals in a month, at a total operating cost of \$1,750,000.

Present average over-all ton-mile costs of air transport are around 40¢. United experts estimate that all technical advances now in the development stage, plus economies resulting from a hundredfold increase in air cargo volume, might reduce over-all ton-mile costs to around 10¢. This figure—not including ground pickup and delivery expenses—might make air express competitive with rail express, but it still leaves air cargo costs beyond hailing distance of railway freight costs, especially in carload lots.



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IN THIS period of war emergency, when American families must carefully guard the value of their homes and keep them from "running down," Celotex is performing an outstanding service.

Celotex Triple Seal Roofing Products are available for roof repairs and roof replacements.

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Your Celotex Dealer is a good man to know.



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FOR THE PRESENT
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The "Hallowell" Line offers you a selection of 1167 ready-made work-bench combinations. You know exactly what you are going to get, what you are going to pay—in advance. "Hallowell" Work-Benches are quickly erected, stand rigid without bolting to floor. Tops of smooth, laminated wood, Masonite, or, if advantageous, of steel. Can be easily added to, moved, re-arranged. A permanent asset. Write for Catalog — NOW.



Fig. 928
Pat'd and
Pat's Pending
Drawer is extra

**STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA.
BOX 598**

Femmes' Frills

WPB limits women's work styles to conserve fabrics as many agencies fail to agree on milady's uniform.

WPB has braved "no man's land" again by tampering with women's styles. But no storm clouds are expected from fashion centers in the wake of Order M-207, because it's designed to assure work clothing for the 6,000,000 lady war workers in prospect by next year's end.

• **Four Models Allowed**—Like many another clothing problem, the catch in work apparel is fabric shortages. Thus, WPB went right to the seat of the trouble by giving manufacturers A-2 ratings on textiles, freezing styles at four models of each garment per year.

Included in the order are overalls, coveralls, work slacks, work shirts, work jackets, work dresses, work aprons, and such hospital clothing as uniforms and patient gowns. Of the four variations of these items, manufacturers are permitted to make only two at a time—presumably to allow for seasonal styling.

• **Those Who Failed**—Controlling an industry that has mushroomed so rapidly presents several twists. There is little or no general agreement among safety engineers, industrial insurance companies, garment makers, and government experts as to what milady should wear to make arms.

Despite all styling attempts, bulk of the market has gone to individual purchasers. Thus the same type of crystal



WPB's work style dictate—full seersucker drape with patch pockets.



Snappy belt 'round, zipper front coverall for the lady war plant worker.

ball has been needed for work clothing as is used to foretell what women will wear for any other occasion.

• **WPB Looks Ahead**—The textile pinch stems from the fact that much work gear is produced from the same materials as sports clothes, house dresses, and summer frocks. Increased purchasing power, lend-lease commitments, and military demands tighten the clamp.

Heading the present list of scarce fabrics is denim. But light percales and broadcloths may join the entries when spring and summer clothing lines hit the market. WPB's new order thus is well-timed and provides a backstop for the relatively impotent L-85.

• **Label Required**—Textiles included in the order embrace virtually everything that could be cut into work wear: denims, coverts, pinchecks, frock cloth, seersucker, corduroy, suitings, print cloth, poplin, jeans, broadcloth, twills, sheetings, and specified rayon types.

A labeling provision of M-207 requires all garments processed from priority fabrics to be marked conspicuously as work wear. Hopeful purpose of the label is to discourage the use of such garments for sports or beach wear.

• **Priorities to All**—Any manufacturer may apply for a rating but is not required to do so. If he can obtain fabrics on the open market, he is free to make whatever he pleases. Such a processor also is exempt from the order's 90-day inventory limitation.

OPA has made no specific price regulation for women's work clothing, letting General Max carry that ball. Price fixing probably will get down to cases, however, as soon as the new order, or its successor, is fully shaken down.



Air Conditioning for a rivet

... and YOU!

Silly? To air condition rivets? Not at all. When aluminum rivets are cooled to sub-zero temperatures they can be riveted faster and more perfectly . . . *speeding up airplane production.*

Many of us think of air conditioning only in terms of comfort for human beings. Yet today, air conditioning's most important job is to keep the *machines and materials* of war industry at desired temperatures and humidities.

To meet these wartime needs, revolutionary advances in air conditioning technique have been made.

Temperature and humidity are maintained *far more exactly* than ever before. Equipment is more compact, more flexible.

With the coming of peace, this experience will be applied to the making of improved air conditioning equipment for all sorts of uses.

Packaged air conditioners will be smaller, more compact, more economical—many more homes will

have them. And in offices and factories, air conditioning will lower costs and increase efficiency. General Electric will be a logical source of all types of this new equipment for air conditioning, refrigeration, heat transfer and heating.

Air Conditioning and Commercial Refrigeration Department, Division 422, General Electric Company, Bloomfield, New Jersey.

Air Conditioning by
GENERAL  ELECTRIC

Keep 'em Playing

New committee of radio industry and federal agencies pursue that aim with a program of standardization.

Washington has announced that it wants one radio receiving set per home for the war period. It thereby officially recognizes home sets as necessary equipment for sustaining the civilian front through broadcasts of news and morale stimulants. Since manufacture of sets ended last Apr. 23 (BW-Mar.14'42, p20), maintenance of the set-per-home quota depends on present stocks of new radios and servicing of old models.

• **Parts for a Year**—Stocks in the hands of jobbers and retailers are said to be sufficient for one year at the present sales rate. Radios are going like hot cakes in the current Christmas demand. A recheck after the holidays will be needed to determine exactly how far inventories can be stretched.

Spare parts also are sufficient to keep the country's 45,000,000 home sets in service for about one year. One exception is power-rectifier tubes for midget sets (small AC-DC units). In this case, it is not so much a shortage as maldistribution that has overstocked some dealers while others' shelves went bare.

• **WPB Handles Tubes**—Tube supplies are being handled directly by WPB. But WPB and OPA have called for outside help in standardizing other repair parts so that available materials, instead of being dissipated throughout thousands of unnecessary styles and models, can be kept to the minimum number sufficient to keep the loud-speakers in good voice.

At the request of OPA and WPB, a committee of the American Standards Assn. has tackled the simplification job. Chairman is Dr. Orestes H. Caldwell, editor of Radio Today and Electronic Industries and former federal radio commissioner. The group includes technicians of the industry in addition to representatives of OPA and WPB.

• **Repairs for All**—Meeting in New York last week, the committee made tentative decisions which will be elaborated and submitted to the industry. Thereafter OPA will approve the simplified lines of parts and the standards of quality and will set price schedules. Beginning about Mar. 1, parts manufacturers will make these types and no others. WPB will see that amounts manufactured keep within limitations.

Outcome will be the "victory line" of repair parts. The committee announces it will include sufficient production of each type to service adequately the modern home receivers now in use.

• **Standardizing the Parts**—It's understood that the association group decided



MODERN MOLLIES

Christmas gifts for service boys are only one responsibility of these modern Molly Pitchers, organized at Hyatt Bearings Division of General Motors, Harrison, N. J., to replace men in in-

dustry, cheer the fighting forces with gifts and letters, and stimulate social events. With a "battle song" and an enrollment of 400, Hyatt's Molly Pitchers are now inviting women workers to form parallel brigades in other plants.

on 14 standardized paper capacitors to take the place of roughly 300 previous models. Eight electrolytic capacitors housed in cardboard tubes will displace some 357 older types, many of which used aluminum or zinc cans. Similarly eleven volume controls will serve instead of the more than 2,000 formerly made. In these steel has been substituted for aluminum or brass in all parts except those carrying current. There will be only five power transformers to bat for the scores formerly sold, and these will be stripped of all frills so they can be fitted into almost any set. A single power choke will be made for big old-fashioned sets.

While tubes are not included in the A.S.A. recommendations, Washington officials are giving them plenty of attention. Some effort will be made to level off the peaks and valleys of metal tube inventories. These are volume items for small home receivers and are made by only two manufacturers—Radio Corp. of America and Ken-Rad, of Owensboro, Ky. On other tubes the proposal is to restrict drastically the number of items each manufacturer can produce.

• **Service Men Wanted**—The program seeks only to keep home sets from going dead. There is no provision for repairs to the 9,500,000 automobile radios; nor for 3,000,000 portables since batteries are tight even for military equipment. Three-way sets (operating on AC and DC current or storage batteries) are included as are "farm type" receivers,

which are powered by low voltage sources, including wind generators.

While authorities are confident that standardized repairs will work out, other problems will remain on their doorsteps. One of the most serious is the shortage of service personnel. Good young repair men have flocked to the Navy and Army where shortages of communications technicians assure them good noncombat ratings. Older repair men have migrated to war industries where a good one can earn a steady \$1.30 an hour and a poor one 90¢. A recent government survey disclosed that in one section of the Middle West there were three adjacent counties without one competent radio service man.

• **Last Year—a Record**—Interest in war broadcasts, plus plenty of spending money, is booming demand for both repairs and new units. Retailers report that the expensive sets, which manufacturers ground out in their last spasm of spring production, are going fast. The idea was to provide a living for the trade. On one midget set, which a manufacturer sold to retailers for \$6.95, his gross profit was 25¢. The stores' margin also was thin. On higher priced numbers retailers get a markup of around 40%.

Running full blast under last year's war threat the industry produced an all-time record of 13,000,000 sets, an increase of more than 2,000,000 over 1940. When WPB clamped down last spring, it allowed only 3,000,000 sets for 1942.



Cargo planes may come before Peace

*(Why not Plan Now
for Air Freight?)*

POLITICAL boundaries in the post-war world may be shadowy and indistinct. But the fact that there will be overseas Air Freight running into millions of pounds per year, stands out sharp and clear.

This development may radically change the whole basis of some businesses. It cannot help but change the business thinking of exporters and importers. And it is not too soon today to begin making post-war plans accordingly.

If cargo clippers should come before peace (and they may), wouldn't you like to know the profit possibilities that will open up for your products the day peace comes?

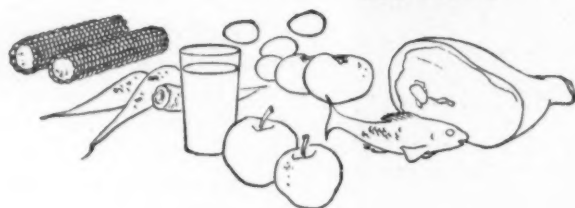
• • •

Because Pan American pioneered both Air Express and overseas Air Freight we have some facts and figures that should interest you. Pan American World Airways System, New York.

Wings over the World **PAN AMERICAN CLIPPERS**



NOW it's dehydrated foods
for war!



... another "victory job"
for clean, controllable **GAS**

The big drama in foods today is dehydration, which saves containers, saves space, saves weight and—of course—saves shipping.

Modern Gas-fired drying equipment thus comes into a new use to speed foods to our armed forces and our allies. At one stroke it helps lessen the U-boat menace to our supply lines, and offers farmers, fruit growers and food processors a new channel for the orderly transport of needed foods to distant fronts.

Drying processes for foods, chemicals and drugs have always

been "duck soup" for Gas because of its cleanliness, speed, controllability and economy. What more natural than for Gas to forge ahead into this new field? It is but another of a long line of solid contributions by Gas to our war effort.

If you have a drying or other industrial heating operation that presents difficulties, why not call your Gas company today and ask for technical assistance?

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THE TREND IS TO GAS

FOR ALL
INDUSTRIAL HEATING

Utilities Quizzed

Federal Power Commission tackles power pool, supplying aluminum works, on finances as rate "scandal" boomerangs.

The first major wartime operating power pool finally went under the Federal Power Commission's regulatory X-ray this week in Little Rock, Ark.

The southwestern power pool was organized in the summer of 1941 by ten utilities primarily to integrate enough generating capacity to serve the government's Lake Catherine (Ark.) aluminum smelter. FPC is particularly curious about the financial arrangements that bind the companies together for this joint distribution of energy and about the pool's contractual relationship with Jesse Jones's Defense Plant Corp., which financed the smelter.

• **Commission Turns Bold**—At the outset, FPC wasn't sure that it was very happy about the case because it knew that the bulk of the evidence with which it plunged into the inquiry could sour. But, during the time the commission twice postponed the hearings, it obtained an as yet untried Presidential grant of authority to superintend the arrangement of the cheapest source of energy for any government undertaking.

FPC thinks enough of the delicacies of the situation, however, to have assigned its chief trial examiner to the case and to have witnesses on deck capable of testifying on any phase of the subject.

• **Public Power Bloc Active**—The southwestern power pool has been a thorny situation since it was born to back up Arkansas's bid for the aluminum plant. Almost at birth, the pool was challenged by the government public power bloc, which foresaw in the integration of the private companies competition for their plan to duplicate the Tennessee Valley Authority power development in the Arkansas Valley.

Upshot was that, after weeks of maneuvering, the aluminum plant business was split, two-thirds to the utility pool and one-third (all it could handle) to the Rural Electrification Administration, which got in a bid when the government provided it with a source of energy by grabbing Pensacola Dam from a state authority in default on federal loan bonds.

• **On Again, Off Again**—After nearly a year of peace, FPC on Sept. 1 initiated its inquiry into the pool's intercompany and Defense Plant Corp. contracts. Then, after stirring up the hornets' nest, it just as quickly pulled away to get a second look. FPC's strongest point, that DPC was paying nearly a cent a kilowatt-hour for energy that

*All America Knows
Budweiser...
but Few Know This*



Starch Helps Make Munitions, Batteries..

Everyone knows that corn starch is used in pies, puddings, cakes and other good things to eat. In addition to various household uses, it is necessary, too, for making batteries, cosmetics, paper and textiles, to name a few. Where does Anheuser-Busch fit in this picture? We learned a lot about cereals from constant analysis of barley for Budweiser. With that knowledge we started a Corn Products Division, which now supplies millions of pounds of starches each year to food and other industries.

Year after year, we have striven with research and resources to better the methods and facilities for brewing Budweiser. To do this, a laboratory specializing in fermentation and nutrition was necessary. Discoveries made in the laboratory and in the plant have led to the development of products contributing to human necessity and progress. Some of these products would appear to have only a remote relationship to brewing, yet, they are the result of scientific research into many allied fields.

Endless research in making the world's leading beer has led to other products

VITAMINS, B COMPLEX—Anheuser-Busch is one of the world's largest sources for manufacturers of pharmaceutical and food products.

VITAMIN D—Our plant produces enough of the basic material for Vitamin D to supply the entire American market.

VITAMINS FOR LIVESTOCK—We are America's biggest supplier of yeast vitamins used to fortify animal feeds.

REFRIGERATING EQUIPMENT—for retailers of frozen foods and ice cream the country over. This division is now working all-out on glider wing and fuselage assemblies for our Armed Forces.

BAKER'S YEAST—We are one of America's biggest suppliers of standard and enriched yeasts and malt syrup used to make bread.

CORN SYRUP—many millions of pounds annually for America's candy industry.

SYRUPS—for food, table and confectionery uses and special syrups for medicinal purposes.

DIESEL ENGINES—Adolphus Busch, founder of Anheuser-Busch, acquired the first rights to manufacture this revolutionary engine in America and thus started our great Diesel industry on its way.



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Budweiser

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A N H E U S E R - B U S C H . . . S A I N T L O U I S

normally would be expected to cost half as much, turned out to be the result of a miscalculation of the needs of the Lake Catherine plant.

The pool's contract calls for a \$2 per kilowatt demand charge, plus a low energy rate, but DPC never has taken more than half the 65,000 kilowatts it bought, although it takes all the REA power contracted for at roughly the same terms. The pool has offered to scale down its contract to the size DPC requires, after being rebuffed on the suggestion that the overestimate of power needs be shared by the pool and REA alike.

● **"Scandal" Boomerangs**—FPC backed away, also, from another of its big points until it got the President's green light to see to it that the government gets the cheapest power available for its war plants. DPC has a management contract with Aluminum Co. of America, covering Lake Catherine and several other smelters, in which Alcoa gets paid in a percentage of profits, with power charged into cost at three mills per kilowatt-hour to determine what profits are.

It looked like a juicy scandal with Jesse Jones buying power high from the utilities and selling it at a big loss to Alcoa until someone remembered that the REA contract results in a similar spread (though not quite so big). Anyway, FPC's authority over the DPC-

Alcoa arrangements was at best questionable until the President acted, and while FPC was mending its fence, Jones reportedly began dickering with Alcoa.

● **Only One Point Left**—This leaves only the question of whether any bugs can be found in the pool's intercompany deals, and these, too, have been undergoing a rearrangement to reflect the turn of events.

Gum Won't Stretch

Chewing addicts scramble for supplies; manufacturers say there's almost as much as last year but demand is up.

Shortage of chewing gum has WPB's confectionery section issuing statements to placate the empty-jawed public. Last week's announcement pointed out that per capita consumption has increased from 39 sticks in 1914 to 130 in 1941. Total production figures were: 28,000,000 lb. in 1914, worth at retail \$34,000,000; 150,000,000 lb. in 1941, worth \$140,000,000. Consumption in 1942 should be about the same as last year, would be considerably higher if the gum could be produced. With civilian demand up 250%, the only thing about the

gum that lasts these days is the flavor.

Needs of the armed forces and war workers come first. Field Ration K alone takes millions of sticks of gum daily, and a certain percentage of manufacturers' production is set aside for distribution to war workers through such outlets as company cafeterias. So civilians, who are more prone to chew than ever, are raiding their dealers' counters for any kind of gum they can get.

● **Any Brand Will Sell**—For example, jobbers report that small neighborhood grocery stores that used to sell a box of gum (20 packages) over a period of two weeks, now find this supply exhausted in a day or two. Nor are buyers so particular as they used to be. Any kind of gum will sell. Nonadvertised brands that used to grow stale on dealers' shelves are now snatched up readily.

Jobbers are crying for more than the 60% of 1941's supplies which they say is all they're getting, but manufacturers insist actual sales records show jobbers are receiving almost as much chewing gum as they got in 1941—some of them slightly more. It's the unprecedented demand that throws the picture out of balance.

● **More Money for Chews**—War nerves are only a partial explanation for skyrocketed sales, although gum manufacturers say that people always chew more gum in times of stress. (Such disasters as floods and fires always result in increased demand from the afflicted areas.) But with money more plentiful, little Johnny and little Mary who used to have a penny to spend for gum now are likely to have a nickel.

Chewing gum is a tidy little industry with only 37 manufacturing establishments employing some 5,500 wage earners. Two of the principal ingredients, gum base (20,000,000 lb. annually) and sugar (60,000,000 lb.), are imported, hence affected by the shipping shortage. Corn sirup (11,000,000 lb.) is in heavy demand by other food industries.

Manufacturers are inclined to cut production of candy-coated gums, which take more than their share of the 70% sugar quota, in order to concentrate on their most popular flavors and package sizes. Wrigley's has abandoned the 5¢ package of PK's and Beechnut its 1¢ package of assorted Beechies.

● **Gen. Max Troubles**—An interesting sidelight on the candy-coated gum situation was a suit brought recently in New York by an outraged gal who hailed a big chain into court. She alleged violation of General Maximum Price Regulations because she said she got fewer pellets of candy-coated gum for more money than she paid on the ceiling base date. Although the case was tossed out of court, the chain pulled all of the small-count packages off its counters pending return of the larger package, and the manufacturer subsequently discontinued the item.

The Right Idea

BUT



Good "Industrial Housekeeping" is more than a matter of buying soaps, cleansers, disinfectants, etc. It should be an over-all economical plan with a regular routine to handle it. Without any obligation to you one of our trained "industrial housekeepers" will survey your plant and make practical recommendations on improving your present system with the idea of saving you time and money. Write Dept. BW for complete information.

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Liquid and Powdered Hand Soaps • Floor Cleaners • Polishes (Furniture and Metal) • Bowl, Drain Cleaners • Disinfectants • Insecticides • Rust Preventive Compounds to Government Specifications



CUT THIS OUT AND GIVE IT TO YOUR PLANT SUPERINTENDENT TODAY

Oil Gets Ready

Industry prepares to pool all facilities, if necessary, by forming committees and making extensive surveys.

Plans for pooling trucks and marketing equipment are being worked out by the oil industry on an as, if, and when basis. It's just in case the government requires some such step in the future.

• **State Committees Formed**—Marketing men in various parts of the country are making sample surveys of the possibilities, working under the auspices of both the Office of Defense Transportation and the Petroleum Administration for War (until recently the Office of the Petroleum Coordinator, Harold L. Ickes, Prop.).

Genesis of the idea came first from ODT and its General Order 21 which requires Certificates of War Necessity for all trucks and anticipates a 25% reduction in truck mileage. To apply this to petroleum marketing, ODT set up Petroleum Transport Advisory committees in each state to cooperate with owners and users of retail tank trucks in working out plans for reduction in tank vehicle mileage in local deliveries.

• **No Revolution Seen**—OPC entered the picture when it required pooling of tank cars and train-load terminal facilities in the East, and called on the industry to work out other plans for joint use of facilities. Now OPC has named 200 oil men to regional subcommittees to promote joint use of all types of facilities in production, transportation, refining, and marketing of oil and natural gas.

Apparently neither ODT nor the Petroleum Administration plans to order pooling of facilities on any large scale in the near future aside from steps already taken. Industry committees have ironed out their jurisdictional problems, more or less, and in many localities they are conducting surveys jointly to see what might be done.

• **Competition Retained**—In the Midwest, for example, 19 typical counties in 15 states have been selected for sample questionnaires and surveys, each under direction of an oil marketing man. With the industry thus in charge of preliminary plans, the program is designed to maintain the competitive status of all marketers and the identity of each concern and its brand names. It is hoped this can be accomplished even if necessary to pool tank trucks and other marketing facilities and even if standard specifications for gasoline must be nation-wide as they are in the East.

ODT's angle is only to reduce truck mileage through such things as elimination of crosshauling, special deliveries,



Keeping the Gremlins out of Uncle Sam's Subs —

Gremlins, in airmen's lingo, are little elf-like men who like to (1) steal rides on planes (2) ball up the works.

Gremlins who haunt Flying Fortresses are said to wear riding boots and spurs. Those who inhabit giant flying boats affect high rubber boots.

These latter are first cousins of sea-going Gremlins with long rusty beards who would like to give our subs their unkind attention.

These Gremlins are of the genus *Corroso*. They wear rubber boots, bathing suits, diving helmets . . . and smoke big acrid pipes. They would love to get at vital parts of our submarines. They delight to work in the humid heat found in all undersea craft.

These Gremlins are not funny to Uncle Sam. Keeping them out of our subs is an

essential and man-size job. The 30,000-plus precision parts of a submarine must function with split-second accuracy. Gremlins . . . and all other contributors to corrosion . . . must be kept under control.

That's why so many vital submarine parts are made of MONEL.

Tougher than any Gremlin, strong, corrosion-resistant . . . in fact, a metal that combines *all* the essential "sea-goin'" properties, MONEL keeps these willful little rust-beards out!

Today MONEL is doing as important a war job . . . in submarines, torpedoes and other front line assignments . . . as it does in industry, both in war and in peace, on the home front!

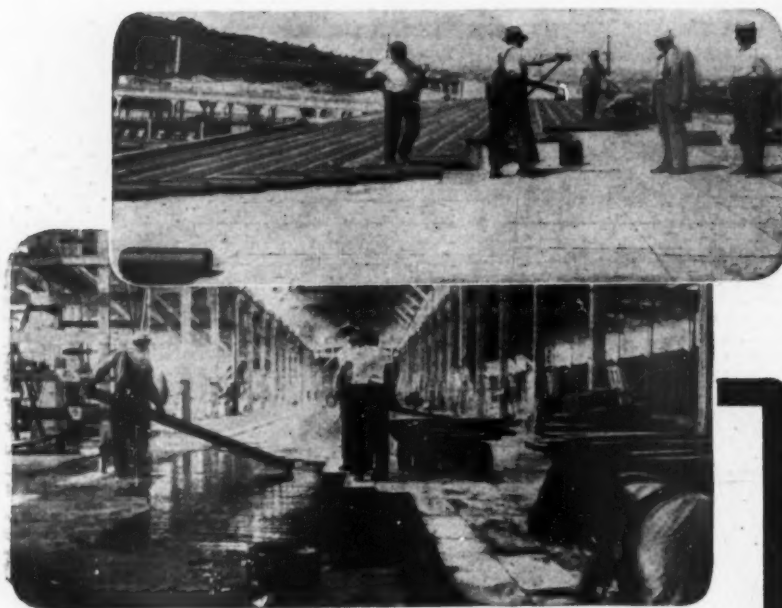
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ASPHALT PRODUCTS

-serve ALASKA SALMON INDUSTRY

In the huge warehouses at the pier, Port of Seattle, much of the tremendous Alaska Salmon is repacked, labeled and shipped out for American and export trade.

To make sure of roofs that would withstand hot sun, rain, fog and salt air, the warehouses were protected with CAREY Asbestos Built-Up Roofs. To facilitate trucking and handling of the salmon, runways of the warehouses were paved with CAREY Elastite Asphalt Plank. Thus, overhead and underfoot, Carey Products are contributing to the economical production of one of America's important foods.

If you have a roof problem, a floor problem, or both, you can rely on CAREY for the correct solution. A nationwide organization is ready to serve you. For details, address Dept. 29.

Carey Built-Up Roofs are Engineered

Every Carey Roof is constructed to withstand adverse local conditions, such as extremes of temperature, presence of salt air, chemical fumes or other factors that affect roof service. That's why CAREY Roofs consistently wear longer, cost LESS per year.

CAREY ASPHALT PLANK IMPROVES EFFICIENCY OF WORKERS

While relatively hard, this plank is resilient; comfortable under foot; steps up efficiency of workers. Its light weight lessens structural burden. The ideal paving material for foot or vehicular traffic, bridges, etc. Highly resistant to wear and abuse; maintenance is extremely low.

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Dependable Products Since 1873

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callbacks, duplicate routes, and unnecessary trips. Interest of the Petroleum Administration is much broader and aims at joint use by all branches of the industry of all facilities, such as drilling equipment, bulk storage, and refining capacity in addition to marketing.

Futile Conversion

Unemployment mounts in Grand Rapids after partial abandonment of glider program for trainer planes.

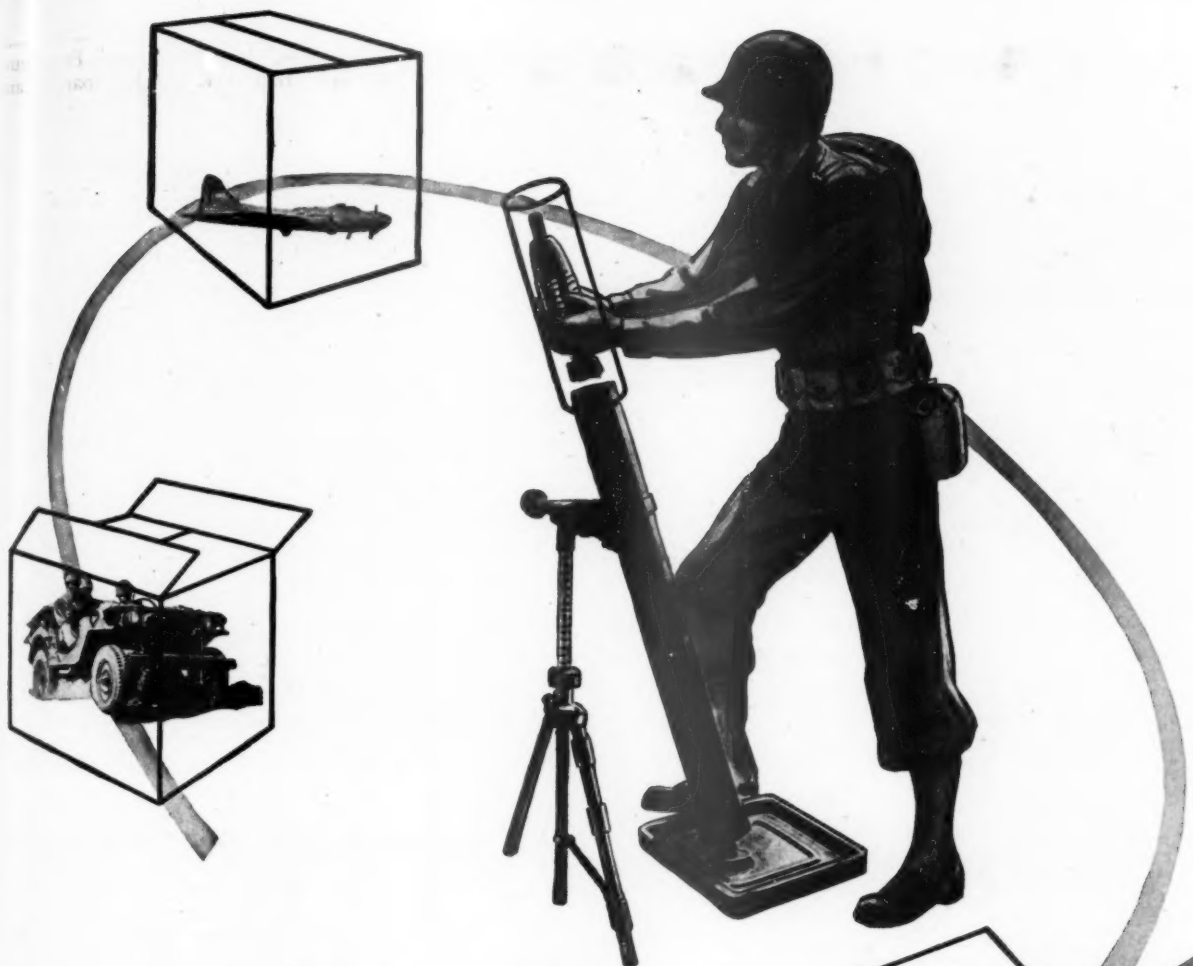
If any city is more unhappy than New York about the war program (BW-Jul. 18'42, p35)—the boom that never came—it is Grand Rapids, Mich. Grand Rapids is disillusioned, for its ambitions and well-laid plans have fizzled. And as a result, where Grand Rapids expected to be neck-deep in war work by now, it has, instead, an estimated 7,000 persons on relief and WPA rolls (out of 40,000 families).

• **Conversion Tried**—Grand Rapids has been built around the furniture industry. When wood began to be scarce for civilian applications last spring, and when metal for supplemental furniture uses, like springs, became even harder to get, 13 furniture makers in the district banded together and set up Grand Rapids Industries, Inc. (BW-Jun. 13'42, p62). The objective was to obtain sub-contracts on wooden parts for trainer planes and gliders.

Hope came first from the headquarters of Grand Rapids Industries. The word was released that a major assignment had been taken for glider parts, to be supplied to perhaps the largest builder in that phase of the war program. At the same time, other reports indicated that glider output was being shoved steadily toward a high priority rating.

• **Glider on Skids?**—Lately, however, glider work seems to have diminished in importance. That in itself would not have been too bad for Grand Rapids Industries, Inc.; much worse was the release by the government of the prime contractor to quit gliders and concentrate on trainer planes instead. So the Grand Rapids pool was left without its biggest project, and it now is trying to fill the vacuum with a group of smaller contracts.

That was not the only setback for the war production plans of the peacetime furniture capital. Announcement of cancellation of the Nash-Kelvinator contract to build flying boats on the Gulf Coast was another body blow, for in the Leonard refrigerator division of Nash-Kelvinator, at Grand Rapids, was scheduled to be built a good share of the parts and subassemblies for the cargo carrier.



HOW TO PACK A WAR

• Even prosaic packaging is different this time. Ammunition, foods, tank, truck and plane parts for the Second Front—and all the Fronts—are going to war more safely, quickly and handily because they are packed scientifically for the job.

• Special packages are the rule. Packages that meet military and other government specifications . . . packages that even go beyond these requirements to expedite handling, cut down waste and damage, save time and materials, weight and shipping space.

• To every present or prospective war contractor, Container Corporation offers the complete facilities of its strategically located plants, its staff's 2 years of experience in military packaging, the fruits of months of work with the government departments and agencies.



• Within our own organization, we combine the manufacture of boards, the design and fabrication of countless types of paperboard packaging: corrugated and weather-proof fibre containers, folding cartons, and other packages in almost infinite variety.

• We'd like to send you a new booklet, "Paperboard Goes to War," a practical survey of war packaging as we are doing it today. Write or call our nearest office for it, and arrange to discuss your war packaging with our staff.



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General Offices: 111 W. WASHINGTON ST., CHICAGO

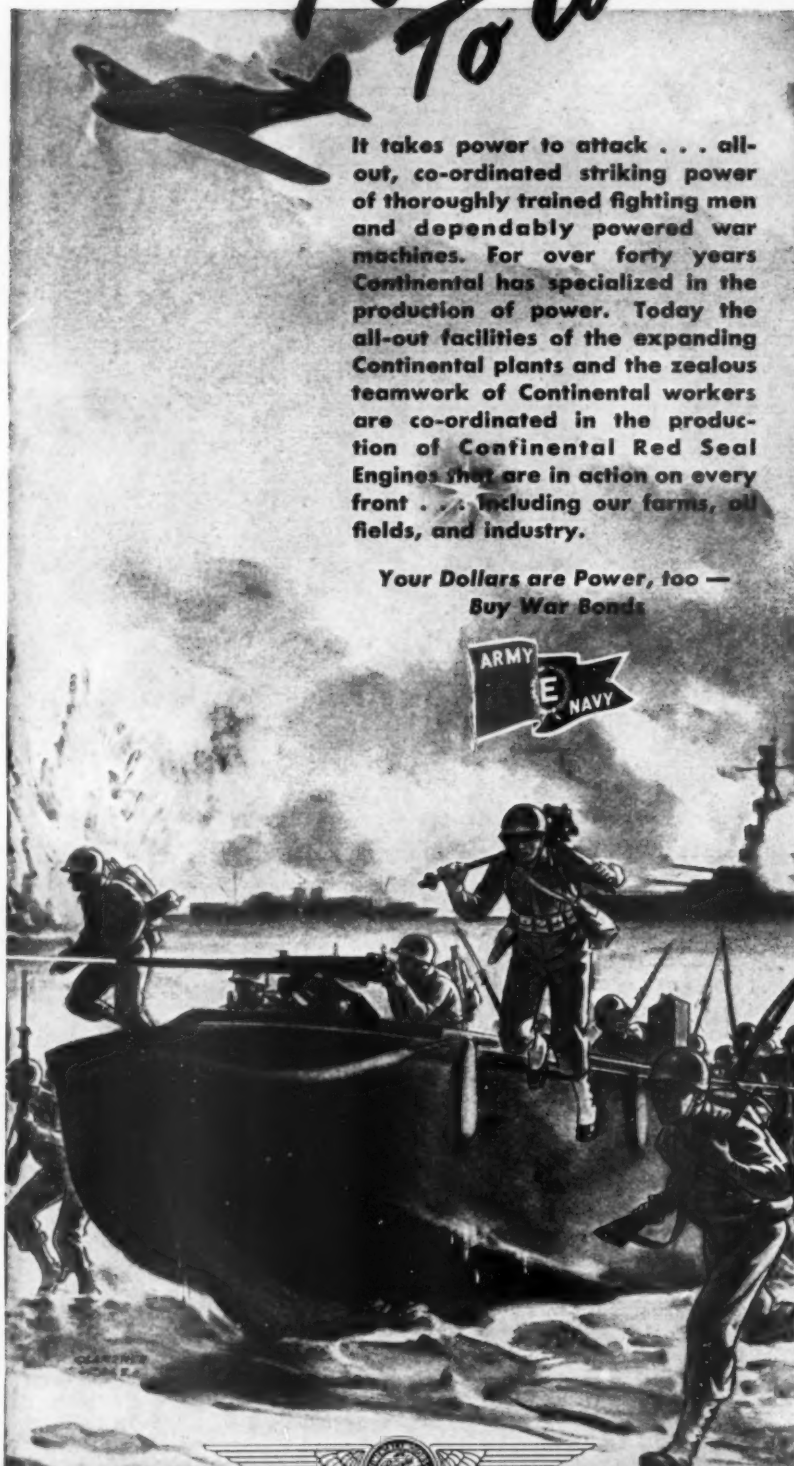
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Power To Win

It takes power to attack . . . all-out, co-ordinated striking power of thoroughly trained fighting men and dependably powered war machines. For over forty years Continental has specialized in the production of power. Today the all-out facilities of the expanding Continental plants and the zealous teamwork of Continental workers are co-ordinated in the production of Continental Red Seal Engines that are in action on every front . . . including our farms, oil fields, and industry.

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Buy War Bonds



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WAR BUSINESS CHECKLIST

A digest of new federal regulations affecting priorities, price control, and transportation.

Carbon Steel

WPB has taken complete control over production and delivery of carbon steel made in electric furnaces in an amendment to the order controlling alloy iron and alloy steel. The order requires producers of alloy iron, alloy steel, and electric carbon steel to submit melting and delivery schedules for WPB approval. (Order M-21-a, as amended.)

Pen and Pencils

WPB has cut production of pens and pencils and has banned the use of critical materials wherever possible in their manufacture (Order L-227). Here is a summary of the terms of the order:

- **Fountain Pens**—Approximately 18,000,000 may be produced in 1943, compared with 50,000,000 in 1941. Rubber sacs for new pens are prohibited after exhaustion of present stocks. Use of other critical materials is banned with certain exceptions. Repair parts may be produced up to 120% of 1941 output.
- **Mechanical Pencils**—Production is limited to 47% of 1941 output. Use of all critical materials is banned except low-carbon steel for functional parts, which is limited to eight pounds per 1,000 pencils. No rubber may be used in erasers. Repair parts may be produced up to 120% of 1941 output.
- **Wood Cased Pencils**—Output is limited to 88% of 1941. Use of all critical materials is banned, including rubber for erasers.
- **Pen Holders**—Output is limited to 75% of 1941. Use of all critical materials is banned.
- **Pen Points**—Output will be 185% of 1941, resulting in use of approximately 150 additional tons of low-carbon steel.

Transportation Tax

Three orders have been issued covering commodities which were exempted from OPA's order directing that the 3% property transportation tax imposed by the 1942 revenue act must not be passed on (BW—Dec. 5'42, p38). Sellers of iron and steel scrap and of all grades of coal and solid fuels may pass on the tax to the ultimate consumer in the form of a price increase. In the case of coal, the tax must be stated separately rather than be included in the final price.

Jobbers, dealers, and distributors han-



WAR AND BUSINESS

Do it in Writing

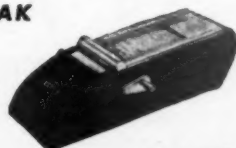
WITH EGRY SYSTEMS AND FORMS

EGRY Systems meet every requirement for speed, accuracy and protection in the handwritten or typed recording of all business transactions. And now that typewriters are being drafted, more work must be done on those remaining, and more forms will be written by hand. To help meet this situation, EGRY offers you three time-proved Business Systems:

- 1—The EGRY TRU-PAK Register steps up the writing of handwritten records, assures complete control over every business transaction.
- 2—The EGRY SPEED-FEED attaches instantly to any standard make typewriter and uses EGRY Continuous Printed Forms. This combination speeds up the output of all typed forms—makes one typewriter do the work of two by eliminating many wasteful, time-consuming motions.
- 3—EGRY ALLSETS are the modern single set forms for speed-writing all business records. Interleaved with one-time carbons, EGRY ALLSETS eliminate many manual operations.

EGRY Business Systems are designed to meet the record requirements of every departmental activity of war and business. Send for folder "Typewriters are Drafted." Address Department BW-12.

TRU-PAK



SPEED-FEED



ALLSET FORMS



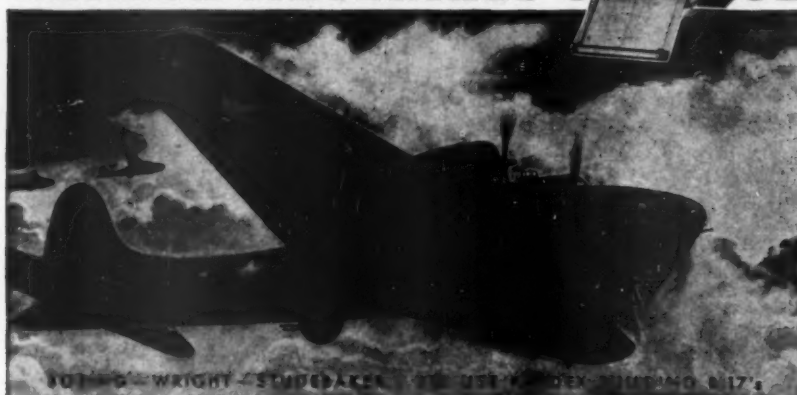
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EXPEDITES ENGINE-OUTPUT
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68% OF ARMY-NAVY
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Get rid of "lost motion." With BELfone you just trip a key and talk instantly and directly with any individual in any department of your office or plant! Or you can confer with three or more department heads simultaneously—as easily as though they were gathered around your desk. You save valuable time and hundreds of steps . . . you avoid waiting for messengers or switchboard connections . . . you keep telephone lines clear for outside calls . . . you expedite production by getting instant action on your orders, ideas, inquiries and instructions. A complete BELfone system tailored to your needs can be installed quickly, economically. Upkeep costs are negligible. No costly rentals! Get full details without delay. Write today!

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dling other iron and steel products for resale must treat the new tax in exactly the same manner as the 6% freight rate increase of last March.

Holiday Travel

Between Dec. 12 and Jan. 15 railroads will be allowed by the Office of Defense Transportation to operate special trains or extra sections, if they are necessary to meet transportation demands of members of the armed forces on furlough. In addition, passenger cars may be included where necessary in trains that are ordinarily operated primarily for transportation of mail or express. Carriers taking advantage of the special permit must report to ODT in writing within 48 hours.

Tank Cars

Shipment of petroleum products by tank car from the Middle West and Southwest into Florida, Georgia, North and South Carolina, West Virginia, and the western portions of New York and Pennsylvania has been forbidden by the Petroleum Administrator for War. Cars thus released are to be used exclusively to haul home-heating oils and kerosene into remaining sections of the East Coast area, principally New England, and to meet East Coast naval demand.

Telephone Repairs

WPB has assigned telephone companies a priority rating of AA-2X for emergency repair materials in the event of a plant breakdown, and an AA-5 blanket rating for ordinary maintenance, repair, operating supplies, and operating construction. (Order P-130, as amended.)

Paint Containers

WPB has issued an order standardizing size and design of glass containers for paint. Due to the restrictions on metal cans and the lack of a suitable all-fiber container, demand for glass containers is heavy. The order aims to prevent the use of many different sizes and styles, which would require a large number of separate molds and consequent high use of mold iron. As far as possible, sizes are those standard in the industry, and designs are those of stock food jars now in production and producible without new molds. (Schedule E to Order L-103.)

Cotton Yarns

Certain English combed cotton yarns, which WPB has suggested as desirable for use in welts, toes, and heels of rayon and cotton hosiery, have been exempted from price control by OPA. Final hosiery price ceilings are not affected. Reason

It's right in his lap

The subject of the photograph is named John.

He is the Average American.

A very *un*-average person he is. He and his wife and kids (in the service or not) are 'what makes America go'. He works for somebody or other—maybe himself, even—but he runs the country. Increasingly it becomes apparent to him that his responsibilities and those of his kids are not limited by our national boundaries.

He runs the country?

Yes. What is perhaps more urgent is that HE RUNS YOU.

He's got the major problems of the world squarely in his lap. He realizes that if he doesn't tackle and solve them he will have to take orders from whoever tackles and solves them first. *He is thinking very hard these days.*

He doesn't like to sound off an opinion without plenty of facts to fortify his instincts.

He relies on radio, enormously and increasingly, for the facts and impressions on which he bases his judgments. He and his family listen some 5 hours a day. He is cagey as a fox about believing—or disbelieving—the information, argument and emotion he gets from the air. But out of his weighing, accepting and rejecting of everything he hears, he forms an opinion, and acts on it. This is called *public* opinion. *Radio* public opinion is 31 million families strong.

His personal opinion—no matter what the captains and the kings may say—will decide what happens to the USA in the factory, the military field, and the home.

He is not to be trifled with, nor deceived—especially on the air. He is "open to argument", and in the long run he is just. He is grateful for a good time, bountiful in his generosity, scornful of fraud—and loyal to tried friends.

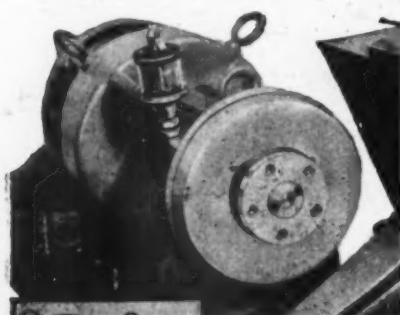
He's worth taking up your case with. In 28 million homes he and his family listen to CBS. After all, he's your boss.

The CBS logo, consisting of the letters "CBS" in a white, serif font, centered within a dark rectangular box.

*Our production
is up 48%*

thanks to this brake!

This new user writes: "In a 30 day test between a Magdraulic - equipped machine and 6 others with original solenoid-type brakes (lower photo) superiority of the former was indisputable. Now, since a 100% change-over to Magdraulics our all-over production has increased 48%, material spoilage is down 60%, man-hour waste down 90%. We practically doubled our production without adding a single new machine."



**You can't expect
"E" performance
with
slipping brakes**

Slipping Brakes pile up man-hour and material losses at terrific cost. Why carry over braking inefficiencies into new machine designs when Magdraulic Electric Brakes can improve operating efficiency and production capacity.

ELIMINATE AUXILIARY BRAKE BOOSTERS

The extraordinary torque developed by the Magdraulic Brake originates within the brake itself. The performance story above is typical of the tough braking jobs Magdraulics can handle better. Note the self-contained, compact and streamlined appearance of the Magdraulic Electric Brake as compared to the solenoid-type brake.

Before you freeze designs consult with our engineers on how to adapt your designs to accommodate a Magdraulic Electric Brake for industrial machinery.

For vehicles, too! If you make cars, trucks, trailer units, etc., inquire about the performance of certain heavy duty mobile war equipment equipped with Magdraulic Electric Brakes.

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ARMY



NAVY

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Allis-Chalmers Manufacturing Co.
Springfield, Ill.
Andover-Kent Aviation Corp.
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Whitmire, S. C.
The Bryant Heater Co.
Cleveland, O.
Bucyrus-Erie Co.
South Milwaukee, Wis.
Chromium Corp. of America
Waterbury, Conn.
Congoleum-Nairn, Inc.
Kearny, N. J.
Convenience, Inc.
(Two plants)
Converse Rubber Co.
Malden, Mass.
Crescent Truck Co.
Lebanon, Pa.
Crompton & Knowles Loom Works
Worcester, Mass.
Derosi & Son Co.
(Two plants)
Davis & Geck, Inc.
Brooklyn, N. Y.

The De Vilbiss Co.
Toledo, O.
Dolomite Products Co.
Gates, N. Y.
The Dow Chemical Co.
(Two plants)
The Estate Stove Co.
Hamilton, O.
William F. Fretz & Sons
(Two plants)
General Electric Co.
Ontario, Calif.
Ben C. Gerwick, Inc.
Oakland, Calif.
Horn Signal Manufacturing Co.
New York, N. Y.
Ilex Optical Co.
Rochester, N. Y.
Jones & Laughlin Steel Corp.
Aliquippa, Pa.
R. G. Letourneau, Inc.
Peoria, Ill.
Monsanto Chemical Co.
(Three plants)
Pullman Standard Car Manufacturing Co.
Hammond, Ind.

Radio Receptor Co., Inc.
New York, N. Y.
Robinson Industries, Inc.
Franklin, Pa.
Southern Steel Co.
San Antonio, Tex.
St. Marys Manufacturing Co.
St. Marys, O.
Struthers Wells Corp.
Warren, Pa.
Superior Steel & Malleable Castings Co.
Benton Harbor, Mich.
Todd & Brown, Inc.
La Porte, Ind.
Toledo Dye Works
Toledo, O.
Vega Aircraft Corp.
Burbank, Calif.
Warren Webster & Co.
Camden, N. J.
Westinghouse Electric & Manufacturing Co.
East Springfield, Mass.
Whitney Blake Co.
New Haven, Conn.
Wood Mosaic Co.
Louisville, Ky.

(Earlier winners of the Army-Navy award for excellence in production will be found in previous issues of Business Week.)

for the exemption is that importers were unable to cover increased shipping costs at existing ceilings, while hosiery knitters who were willing to absorb high costs in order to experiment with the new yarn were not permitted to do so. (Amendment 8 to Revised Schedule 7.)

Rayon Yarn

OPA has established dollar-and-cents ceiling prices for the new special rayon yarns that are now being made for use as automobile tire cord and parachute support lines. These high-tenacity yarns have about twice the tensile strength of regular rayon yarns and are from seven to fifteen times heavier. (Amendment 3 to Regulation 167.)

Wool Tops

Wool top futures contracts that complied with ceiling prices on the date the contract was made may be carried out regardless of later changes in the ceiling price due to shifting war risk insurance rates. (Amendment 11 to Revised Schedule 58.)

Cobalt

Cobalt has been made subject to stricter allocation control by WPB. Deliveries of 25 lb. or less to a single customer in one month may be made without specific authorization, as compared with 50 lb. previously. The order sets forth a new and more severely restricted list of uses for which employment of the metal will be permitted. (Order M-39, as amended.)

Calcium Carbide

WPB has placed calcium carbide under complete allocation control, effective Jan. 1, 1943. Monthly shipments of ten tons or less and deliveries for resale for house or mine lighting may be made without specific authorization. (Order M-190.)

Titanium Pigments

All restrictions on the use of titanium pigments have been removed, since domestic output of ilmenite, from which these pigments are produced, will shortly



E. F. BURTON, Chief Engineer of the parent plant, is one of many Douglas executives who depend upon Dictaphone to help them get things done. Says Mr. Burton: "We have found Dictaphone adaptable to a wide range of uses, not merely for dictation of correspondence but even for such special purposes as recording data during test flights. It has been my experience that this machine is an efficiency aid quite in accord with our wartime theme . . . every minute counts."



VIVIAN ENGELBRECHT, secretary to A. M. Rochlen, Douglas Director of Industrial and Public Relations, says: "There is a warm spot in my heart for Dictaphone. The executive for whom I work has become a human dynamo in these critical days, but our Dictaphones enable me to keep pace."

Helping to MAKE EVERY MINUTE COUNT at Douglas ...

IN Douglas Aircraft Company's California plants, as in its Midwestern factories, fast and formidable Douglas-made military airplanes are rolling off the assembly lines in record-breaking numbers.

Managing the vast Douglas organization, coordinating the huge army of Douglas production soldiers, and solving the daily technical and administrative problems, require enough departments to run a good-sized city. It's a tough job—a job that requires the full use of every modern time-saving and labor-saving tool available.

That is why Dictaphone equipment is so important a part of the Douglas organization. Dictaphones are geared right into the production set-up.

Giving Wings to Words . . . Here, as at hundreds of other vital war plants, Dictaphone dictating machines are helping hard-pressed executives do more work in less time.

Some of these men seldom write a letter. They are using their Dictaphones to issue instructions, to record flash ideas

and long reports, to digest government rulings, and to prepare analyses of engineering findings. They are dictating memos to avoid needlessly interrupting the work of their associates and because they can dictate at any time without requiring the presence of a secretary, they are finding it convenient to confirm important phone calls, oral instructions and conference highlights *on the spot*.

Meanwhile, the elimination of two-person dictation leaves the secretaries free to handle phone calls and visitors, and perform other important secretarial duties.

In these critical times, when all Dictaphone users are faced with the urgent necessity of getting more done in less time, such effective application of the Dictaphone method has special significance.

IN the
Central

Transcribing
Department at
Douglas Dictaphone

cylinders are swiftly and skilfully transcribed.



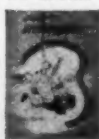
OFFICE ORGANIZATION as well as production lines at Douglas are streamlined. Personnel of the Parts Sales Department use Dictaphones to record parts lists and data to speed vital shipments.

Munitions and Materiel . . . All Dictaphone factory facilities are now engaged in turning out remote control aiming and firing devices for anti-aircraft guns, and other precision instruments for the armed forces and war industries. Thus the skill developed by Dictaphone Corporation in the manufacture of Dictaphone equipment is contributing in helping to provide actual munitions and materiel for America's war requirements.

DICTAPHONE ACOUSTICORD DICTATING EQUIPMENT ELECTRICORD RECORDING EQUIPMENT

The word **DICTAPHONE** is the Registered Trade-Mark of Dictaphone Corporation, Makers of Dictating Machines and Accessories to which said Trade-Mark is Applied.

FREE CARTOON BOOK—Shows uses for the Dictaphone you probably never thought about. Mail the coupon and we'll mail the book.



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430 Lexington Ave., New York, N. Y.
In Canada—Dictaphone Corporation, Ltd.,
86 Richmond St., West, Toronto, Ontario

Please send me your free cartoon booklet.

Name _____

Address _____



Note the **CARBINE...**

It's one of the items we're making now
instead of Office Machines



"After 35 years, the Army goes from the pistol to the carbine. This will be the weapon for all officers up to the rank of captain, and for the supporting troops that carried pistols and relied on riflemen for defense. The new Winchester light, short-barreled carbine has range enough to be a weapon of offense, whereas the .45-caliber pistol is purely a defensive weapon. The Winchester carbine is rated high, and is judged to increase the fire power of the infantry regiment by 33 per cent." *As reported by a prominent news magazine.*

Underwood Elliott Fisher Company, One Park Ave., N. Y.

★ Enlist Your Dollars
Buy More War Bonds
To Shorten The Duration



Carbines are now in mass production by

Underwood Elliott Fisher Company

Former and Future Makers of Typewriters, Adding and Accounting Machines

be sufficient to meet all needs. Formerly almost the entire supply of ilmenite was imported from India. (Revocation of Order M-44.)

Gold Mines

Several gold mines closed by Order L-208 have been granted permission to remove ore already broken and to refill the stopes with waste, provided no substantial amount of critical material is used, and that all work is done by elderly or infirm miners not useful in critical metal mining. Other mines may obtain similar relief on application.

The machinery freezing section of the order applies only to mines that were in operation on or after Sept. 17, 1941, and not to mines closed before that date for a reason entirely unrelated to the national emergency.

Oil Well Pumping Units

Oil well pumping units have been removed from the list of items in which use of steel is prohibited. The only acceptable substitute, high-grade wood, has recently been unavailable. (Order M-126, as amended.)

Glycerine

Allocation control over glycerine has been considerably tightened by WPB. Deliveries for medicinal or pharmaceutical use may now be made in quantities of 1,150 lb. or less in any month to a single customer without special authorization, as compared with 10,000 lb. previously. Other restrictions, including the complete ban on use in antifreeze preparations, remain unchanged. (Order M-58, as amended.)

Duties on Gifts

Christmas gifts up to \$50 in value may be sent home duty free by members of the armed forces stationed abroad. Properly addressed packages from this country to service men overseas have always been in the duty free class.

Balsa Wood

Imports of balsa wood under existing contracts have been prohibited unless the material has already been prepared for shipment. Outstanding contracts would otherwise conflict with the government's own purchase program.

Bananas

Bananas are going to cost less in the future—if you can get 'em. OPA has established dollar-and-cents ceilings for importers and maximum markups over these ceilings for wholesalers, in place of the March ceiling prices now in ef-

"CUDAHY OF CUDAHY"
USE TRUCK-TRAILERS TO
DELIVER MEAT FRESHER AND BETTER
FOR AMERICA'S WORKERS!



The label "Cudahy of Cudahy, Wisconsin" means best quality meats to the large section of the United States served by this veteran packing company.

But since Cudahy began using insulated Fruehauf Trailers equipped with refrigerating units, America's workers are getting even fresher, better meat.

Consider their Detroit market, for example. Meat leaves the packing plant in the afternoon and reaches Detroit . . . 396 miles away . . . before the next dawn.

That extra freshness is worth a lot to Detroiters . . . both dealers and consumers. Quicker delivery decreases the usual shrinkage. There is absolutely no spoilage . . . previously the source of occasional serious loss. Meat is better protected during loading, as loading and chilling time for the Trailers is only 90 minutes.

Truck-Trailer delivery means a lot to the Army, too, for much of this fresher meat goes to the Quartermaster Depot in Chicago and various military posts.*

There have been many advantages for Cudahy, also, in using Truck-Trailers. Costs for icing are substantially reduced! Handling costs are considerably less since the Trailers carry cartons, peppers, alkali and other supplies on the return trips . . . so they are continually in productive use. On the other hand, rail cars return empty and require 6 to 8 days for the round trip to Detroit.

Many thousands of Truck-Trailer users in more than 100 lines of business have had a similar experience—better service for customers and a more efficient, money-saving operation plus, frequently, a substantial gain in sales.

World's Largest Builders of Truck-Trailers

Sales and Service in Principal Cities

FRUEHAUF TRAILER COMPANY • DETROIT

* The use of Fruehauf Trailers as mobile refrigerators, to be left at cantonments until the next refrigerated Trailer arrives, is a practical application. The truck bringing the new Trailer can take away the emptied unit.

FRUEHAUF
ENGINEERED

Trailers
TRANSPORTATION
 REG. U. S. PAT. OFF.

★
 ANOTHER EXAMPLE OF
 HOW TRUCK-TRAILERS
 ARE AIDING AMERICA!
 ★



Truck-Trailers
**CONSERVE RUBBER, STEEL,
 GASOLINE, MOTOR POWER**

Smaller Trucks Used—Since a truck, pulling a Trailer, can haul as much or more than a far bigger truck can carry, the large motor units are released for military work for which they are essential.

Rubber and Steel Conserved—A Truck-and-Trailer combination uses about 16% less weight of tires and 25% less steel than do the 2 trucks required to carry the same load.

Fewer Trucks Used—Many companies, previously operating fleets of trucks, replaced some of them with Trailers . . . and now move the same tonnage with fewer power units. "Shuttling" saves still more trucks.

Gasoline Conserved—A truck, with a Trailer, uses far less fuel than the one large truck or several small trucks it replaces.



TRUCK-TRAILER TRANSPORT IS DOING AN ESSENTIAL JOB FOR ALL AMERICA

Business Week • December 19, 1942

fect which are described by OPA as "excessive." A new price regulation for retailers is in preparation and will be issued soon. (Regulation 285.)

Other Price Actions

Nine specific pricing rules for manufacturers of women's, girls', and children's **outerwear garments** are set up by Regulation 287. . . . Amendment 1 to Regulation 280 exempts from price control **dried eggs** sold to the U. S. Government or its agencies, and liquid or frozen eggs sold to manufacturers buying them for the sole purpose of making dried eggs for the government. . . . Dollar-and-cents ceilings for mine **timber**, industrial blocking, and railroad ties in 15 western states are set up in Regulation 284.

Other Priority Actions

Manufacture of 300 **semitrailer petroleum tanks** is provided for by Supplementary Order L-1-g, as amended. . . . Several new uses for **tinplate and terneplate** are permitted by Order M-21-e, as amended. . . . Order L-229 permits increased use of repair and maintenance materials by **local transit systems** and places production of spare parts for these purposes under regulatory control. . . . Order M-259, as amended, permits hospitals and persons on special diets to obtain **heavy cream** on presentation to the supplier of a physician's statement. . . . Output of portable **electric lamps** and shades containing critical materials is prohibited by Order L-33, as amended. . . . **Acrylic resins** and phthalic alkyd resins are placed under allocation control by Orders M-260 and M-139, respectively.

MARKETING

Cans Go Out

WPB orders more foods out of tin, at least for civilians. Dehydration to hit its stride next year.

No more canned apples, applesauce, blueberries, figs, grapefruit segments, orange juice, blended orange-grapefruit juice, beets, carrots, pumpkin, or tomato catchup for civilians for the duration. That was the order issued by WPB's Containers Division several days before the nation's food processors got together for an emergency war conference in Chicago last week. In layman's language the order said tin cans would be available for packing these products, but all of it would be bought by the government.

● **Glass Order Coming**—The pattern of the 1943 food processing and distribution program was set by two WPB orders, issued shortly before the war conference, and one to come later. Already issued are: (1) a revision of M-81, which controls the use of tinplate, terneplate, and blackplate for all types of food cans; (2) a supplementary schedule to M-86, which tells the food industry how much of each canner's pack must be laid aside for government requirements during 1943. The third order will allocate tin, blackplate, and rubber for glass container closures.

A food not mentioned in the can or

glass container closure order must either be packed in paper, dehydrated, frozen, or be not packed at all. In fact, the quotas and government requirements on foods that are permitted to use cans are so restrictive that it is now clear the nation will have to depend on huge dehydrated and frozen food stocks if all requirements are to be met.

● **Dehydration Talk**—One of the first things heard when President Roosevelt centralized wartime food control in the Agriculture Department (BW-Dec.12 '42,p16) was talk of a huge dehydration program. The Agriculture Department always had been the leader in dehydration—its scientists were ahead of the technical side of the business, and its Agricultural Marketing Administration for a long time was the only government buyer of dehydrated foods. Now it probably is the largest single government customer.

Before the department got centralized food control, it had to go to WPB for the metals and other materials necessary to expand dehydration. With the new food executive order, the department is in a better position to lay down demands for metals and other equipment necessary for dehydration equipment, and WPB is more likely to listen.

● **Cosmetics May Help**—Actually, Agriculture is trying to plan its dehydration expansion with a minimum of strategic materials. For example, a rayon yarn maker who had drying equipment has made arrangements with Stokley, a big food company, to handle some of its dehydration work. Cosmetic houses are looking over the field since dehydrated foods, compressed into neat packages, open the way to use of that industry's packing facilities.

Agriculture's 1943 goal for all types of dehydrated foods is said to be around 1,350,000,000 lb. Dehydrated vegetables will be stepped up from the 100,000,000-lb. June 30, 1943 goal to 400,000,000 lb. for the 12 months after that date. Meat dehydration might be doubled from 60,000,000 to 120,000,000 lb. Dried egg needs may be increased from 240,000,000 to 300,000,000 lb. Dried milk will probably be stepped up, if possible, from 440,000,000 to 515,000,000 lb. This is all for the government and doesn't include anything for civilians, who already have taken to soups in dehydrated form.

● **AMA Was Ready**—Because the National Canners Assn. realized that government restrictions and requirements would change the pattern of food processing for 1943, this group—numerically the largest in the food industry—welcomed hints from government men back in October that they abandon their usual



Roy F. Hendrickson, new Agricultural Administration food distribution chief (left), and Herbert W. Parisius, as-

sociate director of the Office for Agricultural War Relations, confer with over-all food czar Wickard.



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UNIVERSAL HYDRAULIC PRESSES
 TRACK PRESS EQUIPMENT
 HYDRAULIC KEEL BENDERS
 HYDROSTATIC TEST UNITS
 POWER TRACK WRENCHES
 PORTABLE STRAIGHTENER
 FOR KELLY'S AND PIPE

ON FAR FLUNG BATTLE FRONTS, on the new Alaskan Highway, or a little road construction job down in Arkansas, Rodgers Hydraulics are doing their bit. ★ Wherever crawler type tractors tussle with heavy road building or construction jobs, Rodgers Hydraulic Track Presses furnish speedy repair of vital track equipment. Wherever heavy machinery operates — automotive, construction, factory or power plant — Rodgers Universal Hydraulic Presses will do the job with speed, power, durability and safety. ★ *If it's a Rodgers, it's the best in Hydraulics.* Rodgers Hydraulic Inc., St. Louis Park, Minneapolis, Minnesota.

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Today's horsepower is building the battle power for tomorrow's final victorious offensive. All your power in the job now insures maximum battle power, in the field, in the air and on the sea — brings Victory sooner — makes it surer. You can get more battle power out of horsepower with Dodge Rolling Bearings. They deliver capacity loads — insure continuous peak production with ruggedness that has earned the respect of production men who know the beatings bearings take on today's schedules. Dodge Rolling Bearings are completely assembled, factory adjusted, pre-lubricated units

shipped ready to slip on the shaft and run. 50,000,000 revolutions can be expected from one lubrication under normal conditions, and 30,000 hours of operation under conditions for which they are adapted.

There's a Dodge Rolling Bearing for every type of power transmission — for every kind of job — high speeds — shock loads — high temperatures — abrasive dust conditions.

Depend on Dodge for "The Right Drive for Every Job" — depend on Dodge Distributors for local stocks and services — for assistance in modernization — for extending equipment life.

DODGE MANUFACTURING CORPORATION, Mishawaka, Indiana, U. S. A.

THROW ALL
YOUR SCRAP
INTO THE
FIGHT

DODGE

MISHAWAKA



THE RIGHT DRIVE FOR EVERY JOB

January convention in Chicago. Instead of the convention, the N.C.A. called together all canners, dehydrators, freezers, and preservers in an effort to get the government's food processing "marching orders" for 1943 at one sitting. Canners, who are hit by the tin shortage, are number one candidates for conversion to dehydration, because they have the know-how on handling raw materials.

Although planned several months ahead of the food control order, the war conference had a chance to hear the new food processing and distribution boss, Roy F. Hendrickson, former newspaperman selected by Secretary of Agriculture Wickard to head this half of his department's wartime activity. As head of the AMA, Hendrickson long had planned for the day when food control would be centralized in the department; thus the executive order did not catch him or his processor's war conference napping.

• **Grade Labeling Due**—The President's order raised the question of whether WPB's can and food requirement orders, issued four days after Agriculture won food control, would stick. However, since both orders had been approved by Wickard's now defunct Food Requirements Committee, belief prevailed that they would remain pretty much as issued. Agriculture probably will take over the M-86 requirement order, but the M-81 can order should remain at WPB since it technically belongs to the Containers Division.

Another point laid before the conference was the fact that AMA would inspect virtually the entire canned fruit and vegetable pack. This information was brought on behalf of Price Administrator Henderson. OPA's Food Price Division boss, A. C. Hoffman, had already told the Grocery Manufacturers of America that the entire 1943 canned fruit and vegetable pack would be grade labeled (BW—Nov. 28 '42, p7) as an aid to price control. Opponents of grade labeling raised the question of where the government would get enough men to inspect and grade the pack and handle the difficult enforcement.

• **Yardstick for Labels**—Henderson answered half of the question in a pre-conference announcement that AMA was taking over the inspection job. He also promised that the first canned food regulation to insist on compulsory grade labeling would be one to be issued soon for citrus fruits now being canned. He also promised that canners who prefer the word "fancy" would have to conform to AMA's grade A, "choice or extra standard" to grade B, and "standard" to grade C.

To meet other objections of antigrade labelers, he explained that regulations would provide for the cost of imprinting or overprinting on existing labels and the cost of inspection. The OPA boss said that all goods sold to AMA

or lend-lease would have to be grade labeled, but added that goods sold to the Army need not comply with OPA's labeling requirements.

● **Government's Needs**—Originally issued shortly after Pearl Harbor when the U. S. tin supply became tight, M-81 already has ruled out a large number of food products, such as pork and beans. The new order ruled out a number of additional relatively unimportant canned fruits and vegetables, such as bleached asparagus and okra.

Other foods were given unlimited can quotas, but the M-86 government requirement order indicated that very little would be available for civilians. Following are foods that can be packed in unlimited quantities, along with the percentage of each canner's pack that must be put aside for the government: fruit cocktail, 71%; grapefruit juice, 48%; peaches, 63%; pears, 65%; pineapple, 70%; green asparagus, 49%; green beans, 58%; lima beans, 56%; corn, 42%; peas, 48%; tomatoes, 49%; and tomato juice, 43%.

● **Brains Get Cans**—Containers for the two major types of food in which the government has no interest—baby foods and soups—provided the major internal fight within WPB over the can and glass closure orders.

Here is the way the fight was settled: Canned soups, limited to specific solids contents, will get 50% of their 1943 can quotas (later permission will be given to pack them in glass containers, without rubber, up to the full 1942 quota, perhaps a little more); baby foods, also limited to certain formulas, can be packed in tin up to 100% of 1942, and will get an additional 25% in glass. M-81, however, threw meat products for a loss, prohibiting the packing of any meat products, except brains and potted meat, in cans for civilians.

Cutting Service

Retailer Economy for Victory program, backed by OPA, gets results in test cities; New York hangs back.

Although shopkeepers can point to deliveries cut more than a third in the past year, to reduced C. O. D. transactions, and to a 25% drop in goods returned, OPA has hinted formally (Supplementary Order 29) that this is only the beginning. Retailers, it seems, will have to go a lot further in eliminating "frills" to operate under what Leon Henderson terms the "tough" conditions of 1943.

Announced purpose of OPA's regulation—persuasive rather than mandatory—is to free manpower and materials for war production; also it is designed to

provide relief from price ceiling squeezes by permitting retailers to eliminate services without reducing prices (BW—Dec. 5'42,p80). At the same time, OPA protects consumers by forbidding stores to charge for services formerly rendered free.

● **Advance Action**—Smart merchants, for example in Detroit, saw how hard new ceilings were to come by and cut overhead by stripping services long before the new order blessed such economy. But now it's official, and OPA calls its program the Retailer's Economy for Victory Plan.

Since the order, certain cities have adopted OPA's authorizations practically wholesale. For instance, in Lynchburg, Va., which OPA has selected as a typical non-war boom town, clothiers, jewelers, shoe stores, and furniture stores operate under the program.

● **What the Rates Are**—Their deliveries are restricted to three a week, to articles over \$1.50 in value, more than 5 lb. in weight, or greater than 54 inches in circumference. No merchandise may be sent out on approval, or accepted for return by delivery truck. In addition, gift wrappings, lay-aways, will-calls, and C. O. D. orders are curtailed.

In a war industry city, Harvey, Ill. (Chicago suburb), retailers economize for victory by asking customers to carry packages, by staggering business hours to meet tight labor supply and serve war workers. For the first time in the community's history, stores close Saturday nights and do not reopen until noon Monday. Mondays and Fridays they do business from noon till 9 P. M.

Washington has adopted the same delivery restrictions operative in Detroit (package must weigh at least 5 lb., be no less than 54 in. in length plus girth).

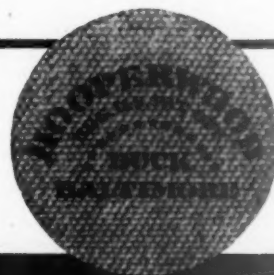
● **No Action in New York**—Conspicuously, New York merchants are to date unaffected by the order. There, stores still graciously comply with Christmas shoppers' "Wrap it as a gift, please" and provide other customer conveniences. The city's retailers say a new program couldn't be effected amid complications of the holiday rush, so they are waiting until after Christmas, or as one observer put it, "until it is too late."

Obviously in the midst of a big season and not yet feeling the full impact of the price squeeze under the General Maximum Price Regulation, the stores are not yet really concerned about economy of operation; in time, pressure of reduced sales is bound to stimulate interest in OPA's advice. Merchandising competition, which can be as fierce in a contracting economy as in an expanding one, will then dictate the uniform and simultaneous abandonment of service frills by all merchants in any given competitive area. Otherwise, they aren't likely to be eliminated at all. Some merchants profess to see trouble with Thurman Arnold's Antitrust Division if they

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Since 1800 (through six wars) the HOOPER name has symbolized highest quality in Cotton Duck and other Heavy Cotton Fabrics, Paper Mill Dryer Felts, Filter Cloth, Rope and Sash Cord



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If you are getting ready to swap your address for a new one, be sure Business Week (that's me) comes along.

I start out from Albany, N Y., every week and I can trail you to your new spot just as easy as I've been making the old one. And I'll like it, too. All you have to do is give me orders ... like this:

Circulation Dept., Business Week
330 West 42nd Street, New York City
Please change my address.

NAME
OLD ADDRESS.....
NEW ADDRESS.....

undertake any such joint-action program.

• **Recommendations Are Set**—When New York stores finally come to consider just which of their pet prewar services are excess baggage in war economy, they will find that OPA and the Department of Commerce have done at least the first round of thinking for them. But they'll probably go into a series of huddles over accepting or rejecting dos, don'ts, and advice. Already OPA has recommended elimination of sales on approval, returned and exchanged goods, gift wrapping and packaging, layaway and will-call privileges, free telephone calls, style shows, store decorations, free concerts, free parking, refreshments,

air-conditioning, and instruction classes.

Services that stores may not eliminate without reducing ceilings are alteration and remodeling, repair, maintenance, or installation services customarily sold with an article by way of guarantee.

Further management economies recommended include self-service, standardization, informative labeling, simplified lines, pooled deliveries, consolidated buying (also subject to suspicion by Dept. of Justice), promotion of staggered payrolls in local factories. The rest of the advice list suggests conservation of supplies, sounds like old fashioned penny-pinching.

Tempest in Cruet

Olive oil producers in California form co-op to blend uniform product and meet the shortage in imports.

California olive oil producers long have been irked at a practice they attribute to New York importers of blending the domestic product with inferior types of Mediterranean oils and marketing the blend under a foreign label.

• **Competitive Product**—Early last month a group of leading growers and processors, responsible for about 60% of California's olive oil production, decided to put up a fight by marketing a branded product of their own to compete.

They figure that with Mediterranean imports cut off, the time is ripe to build a public taste for high-quality domestic oil. So, meeting in Fresno, the Co-operative Olive Products Assn. opened a new plant and hired a San Francisco advertising agency, Brisacher, Davis & Staff, to promote the new brand, "Cal-Crest."

• **Unvarying Standard**—The new co-op will attempt to standardize its product so that it will consistently have the same body, taste, and aroma. One deterrent to widespread use of domestic olive oil has been the variation in quality. Olive oils even from the same grove vary in color, taste, and aroma from season to season depending on such growing factors as moisture and temperature. The co-op will have access to olive supplies from so many sections of California and in such quantities that the final product can be balanced to produce what E. A. Reeves, president, describes as "an unvarying standard."

Domestic olive oil producers are about in the same condition as were their neighbors, the vintners, immediately following repeal of prohibition. As an industry, they have little control over the quality of the oil that goes to market to bid for the housewives' favor. Some of it is excellent; a lot of it is not. Per capita consumption has dropped from about half a pound in 1940 to 0.03 lb. this year, due largely to the almost total absence of imports. A few high-quality producers have bottled their own brands and promoted them nationally, but most of the output has gone to eastern markets in bulk to be bottled, or blended with foreign supplies, by eastern concerns.

• **Output Small**—The absence of imports from Italy, Spain, Greece, Algeria, Libya, and French Morocco offered an opportunity to domestic producers which they weren't in a position to cultivate to the fullest extent. California normally was responsible for only .13% of total



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6. Plan Future Material Handling Requirements

All Baker representatives are qualified material handling engineers. They have been in hundreds of plants, and know intimately the problems confronting you wherever materials or finished products are to be moved. Their experience goes far beyond the use of power trucks—they can evaluate your complete handling set-up, and recommend equipment best suited to your plant. If you are after any of the above objectives, call on the Baker representative nearest you.

Typical Case of Baker Material Handling Engineering Service

Recently a manufacturer, contemplating plant expansion, called in a Baker Engineer to discuss truck requirements. After a complete survey, the production objectives were achieved without plant expansion, by a readjustment of material handling facilities and the addition of new equipment, thus avoiding the expense and inconvenience of new construction.



BAKER INDUSTRIAL TRUCK DIVISION of the Baker Raulang Company
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mess kits
666 first-aid
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basement
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tioning for
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A nest-egg for
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**KEEP BUYING
WAR BONDS!**



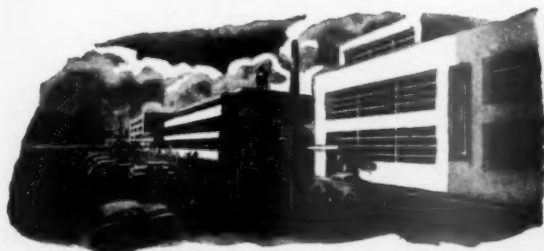
NOW, your War Bonds buy the equipment that keeps our army rolling, and that's money well-spent, but . . .

LATER, your War Bonds will provide the money to start our standards of living rolling upward again. That's how you can both "eat your cake and have it, too!"



NOW, your War Bonds pay for guns to "shoot up" our enemies, wherever they may be the world over.

LATER, your War Bonds will create the purchasing power to make new homes "shoot up" the country over, or to fill existing ones with better household appliances and equipment, improved by the lessons learned from war production. Again—you can "eat your cake and have it, too!"

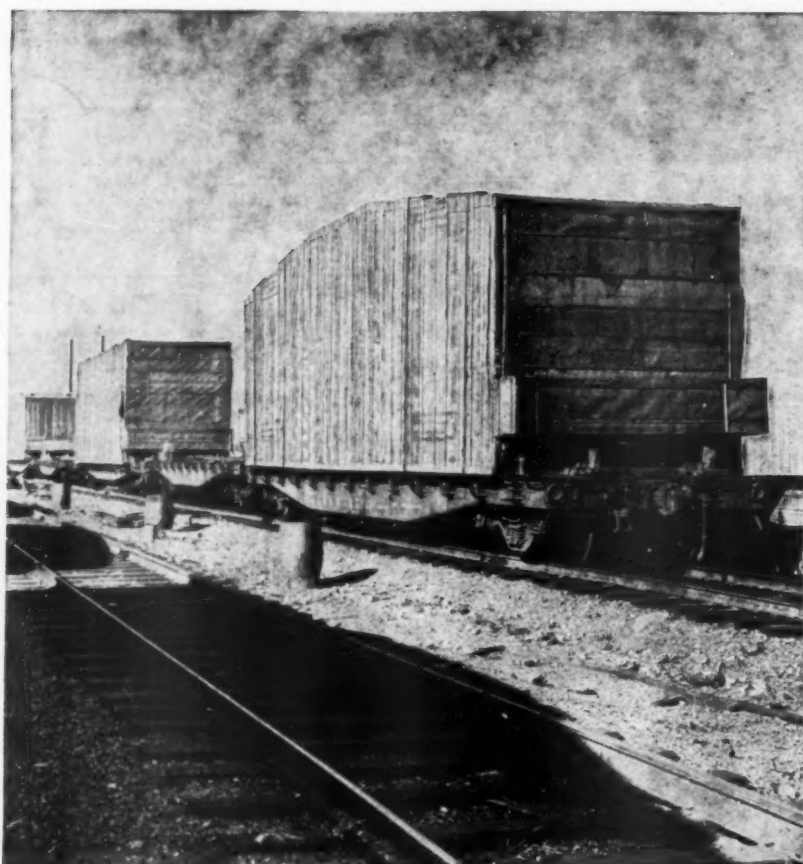


NOW, your War Bonds keep factories going all-out for war, with their production that is astonishing the world.

LATER, your War Bonds will keep plants going all-out for pent-up peacetime demands. When that time comes, our own plants will be ready to resume their 66-year record of building rolling and overhead doors in steel and wood for every purpose.

The **WILSON** Corporation
370 LEXINGTON AVENUE, NEW YORK CITY ESTABLISHED 1876

BUILDERS OF ROLLING AND OVERHEAD DOORS IN STEEL AND WOOD



Surprise Package for the Axis

HERE'S a package that packs a punch planned for the Axis. For inside those crates are modern locomotives bound for overseas. When they reach their destinations on the steppes of Russia, the sands of Egypt, or the shores of Australia, they'll go into action as an extension of America's wartime railroad system—and continue the swift transportation of our men and materials to the battlefield.

The Erie and other American railroads are carrying an amazing volume of shipments like these today, including planes, tanks, guns, and other munitions—and we're pledged to keep 'em rolling just as long as our country needs them.



world production, and although diversion of the olive crop to oil production has increased from 15% in 1932 to 52% this year, the domestic output is only a drop in the bucket.

Prices generally have been highly satisfactory, but in some cases they're so out of line that housewives are turning thumbs down. That's one reason why growers and processors, meeting with OPA officials in San Francisco recently, made few protests over proposed price ceilings which were tentatively set at \$4.75 a gal. for oil delivered at the processing plant without containers.

Rebuilt Mattress

It's all the vogue—thanks in part to Kaiser's big bedding hunt—now that there's no more metal for innersprings.

American housewives learned about one more of WPB's priority orders by the indirect method when department stores a few weeks ago advertised a new service—that of rebuilding mattresses around used innerspring units. Thrifty homemakers dropped into furniture departments to inquire about what looked like a new economy; in many cases they were still able to find new mattresses for the price (typically \$19.95) of a remodel job, naturally decided to buy the new mattress instead.

• **New Stocks Disappearing**—Salesmen frankly said the new service was not designed to save customers money, rather to provide business for the time when already dwindling stocks of innersprings were exhausted. Now many retailers are completely out, others expect to be by the first of the year, few if any hope to have any innerspring mattresses in stock after February.

And they are out for the duration, since production of mattresses containing iron and steel was stopped Sept. 1 by WPB order L-49 (BW-Aug.15'42, p27), which also cut off use of any metal in studio couches, sofa beds, and lounges as of Nov. 1.

• **No Wartime Invention**—Rebuilt mattresses are not an invention mothered by present necessities. Stores such as John Wanamaker in New York have offered remodeling service for years, but remade units seldom amounted to more than 8% or 9% of mattress sales volume.

Several stores report remodeling is now running around 20% of their mattress business. Consensus is that rebuilt innerspring jobs will stabilize for the duration at about 30% to 40% of total mattress sales; cotton or hair mattresses, which heretofore have accounted for only about 20% of sales, will make up the balance. And total sales will, of

course, drop, as innerspring users would rather string along with old mattresses than accept substitutes.

• **Only the Metal Counts**—Major limitation on remodeling is that everybody who wants an innerspring mattress doesn't have an old innerspring—or at least does not have one that can be renovated without addition of virtually unobtainable metal coils or repair parts. Otherwise, needed materials—principally cotton—are not hard to come by. So far, the trade is entitled to unrestricted quotas of cotton felt, muslin sheeting, and ticking. Only threatened shortage is horsehair, most of which is shipped from South America.

Servicing offered by mattress shops is not uniform. For example, B. Altman & Co., New York department store, throws away everything but the steel spring. This is then sterilized and repaired, and a unit of all new materials built around it. Prices for such jobs range from \$19.95 to \$44.95. Other stores offer standard materials, one low price. Still others merely renovate the old mattress, sterilize and repick the hair, then cover with new ticking for around \$14.

• **The Manufacturers' Job**—Department stores have given mattress rebuilding a good promotion play, but that doesn't mean that they have set up repair stations in their stockrooms. Regular mattress manufacturers do the reconstruction jobs for them, more to oblige old customers than to drum up new business. Mattress makers don't need the work. Not only is labor scarce and expensive (\$1.50 an hour) but also the manufacturers are working on government orders, mostly for war housing and the Army. Mattress men are thankful that the Navy resorts to hammocks.

For constructing mattresses on government account producers can get iron and steel, but in drastically reduced quantities. Innerspring frames are now made of wood, and units that formerly weighed 60 lb. weigh 9 lb. (single) or 15 lb. (double) because of reduced metal content.

• **Kaiser's Big Hunt**—The rumor that war demands for spring mattresses would force the industry to concentrate on rebuilding mattresses now in use seems traceable in part to the antics of Henry J. Kaiser. When the shipbuilder began recruiting workers from New York for his three Portland shipyards—a project later abandoned (BW—Oct.10'42,p24)—he also needed bed-springs and mattresses for 9,970 apartments in the housing project (BW—Oct.24'42,p18) in which those workers and their families were to live. Therefore he scoured the East for innersprings almost as diligently as for labor. Success of the search is unrecorded, but it served to give the whole Eastern mattress trade a new idea of the war value of an old innerspring.

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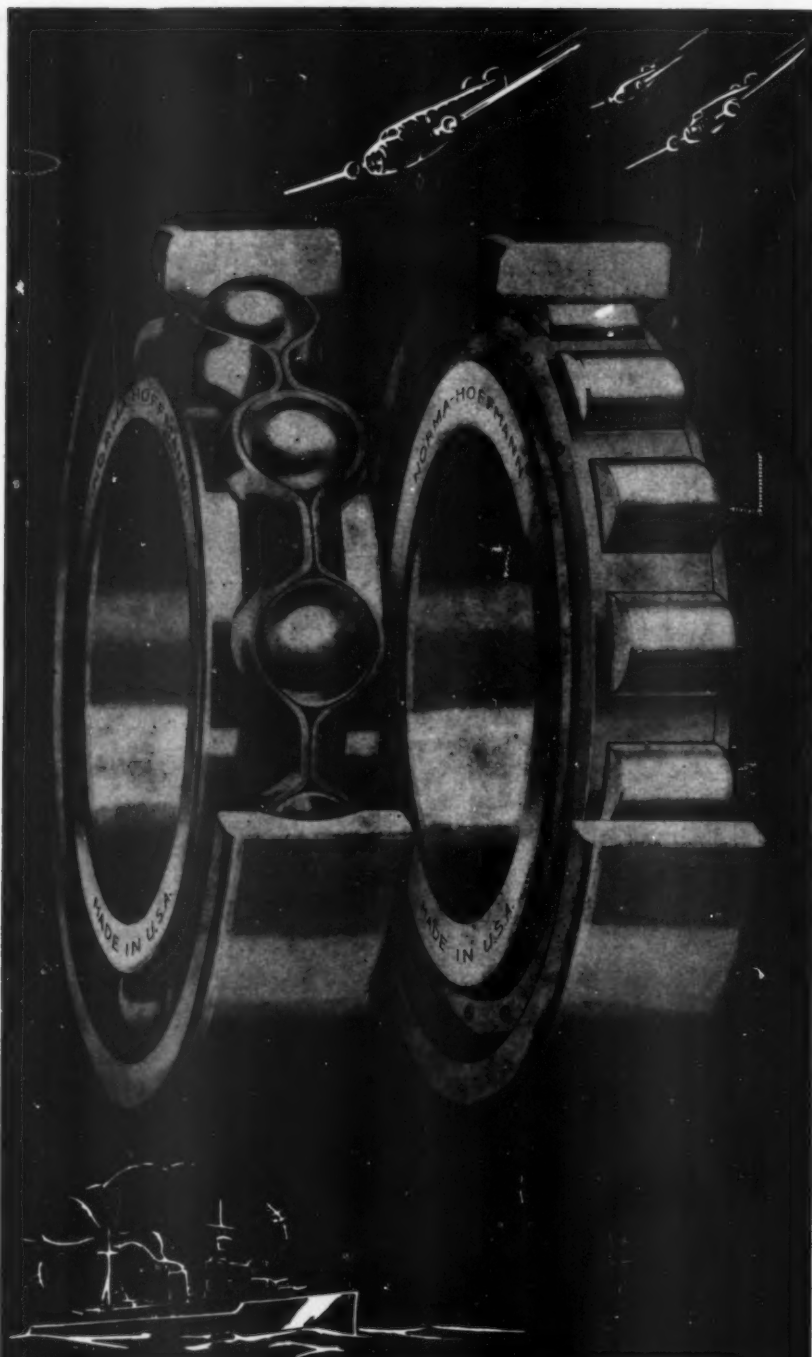
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Peg Beef Prices

New dollar-and-cents ceilings for various grades at wholesale are expected to correct spotty distribution.

OPA has at last taken the steer by the horns. After six months of ducking and dodging the issue of beef prices and supplies, Henderson's office this week set dollar-and-cents ceilings on beef at the wholesale level as "the first step in an integrated program which ultimately should insure a more equitable distribution of the nation's beef supplies."

• **Retailers Next**—For the present retail prices on principal cuts will remain frozen at their highest March, 1942, levels in accordance with the original Price Regulation No. 169 issued last June, but OPA has promised that adjustments will be made if profit margins are squeezed and has indicated that those adjustments will permit fixed margins over net cost for different types of stores.

OPA's press release accompanying the revised Order 169 takes careful note of the fact that livestock prices remain "unaffected." Farm bloc spokesmen in Congress, already out after Henderson's scalp, will flatly disagree, for they know that the freeze at the wholesale level will be promptly reflected in all live cattle transactions.

• **Picking the Customers**—OPA's original order, which pegged wholesale as well as retail prices at their March highs, has been largely blamed for the spotty distribution of beef, for wholesalers naturally chose to sell to those retailers to whom they had sold at the highest prices in March. Big distributors with low prices and low ceilings got lean pickings.

The new dollar-and-cents prices reflect the averages prevailing in September of this year; in a representative case, OPA says this would mean an increase from 19½¢ to 21¢ a pound on a good grade of beef at Kansas City, which serves as the basing point for all of the ten pricing zones established by the order. Prices are also fixed by grades, which must now be established by official federal graders on all beef sold at wholesale.

• **Highest Since World War**—The new prices represent 136% of parity, the highest since August, 1919. Objectives that OPA thinks its order will serve include (1) the maintenance of slaughtering facilities in centers remote from livestock production areas; (2) sufficient differentials between grades to guarantee the production of beef with varying degrees of finish; (3) maintenance of a proper price relationship with pork, on which dollar-and-cents wholesale prices were fixed two months ago.

THE WAR—AND BUSINESS ABROAD

Spain Faces A Showdown

As soon as Axis is driven from North Africa, pressure on Franco will be redoubled; Nazis not only need Gibraltar to cut United Nations supply lines, but also Iberia's resources.

Except for the heartening news of Rommel's new retreat in Libya, the North African war remains a battle between services of supply.

While striving for air superiority, American and British armies moved cautiously in Tunisia, drawing reserves and matériel in behind them while the Axis risked important losses in an unceasing effort to pour greater manpower and equipment into the battleground around Tunis and Bizerte. The issue in this area will be decided when these forces accept battle, and the outcome will determine finally whether the Axis is capable of regaining the strategic initiative by developing a major battleground in Tunisia or, while engaged in a delaying action there, by shifting the emphasis to Spain and Gibraltar.

The Position of Spain

Because the final objective of the African campaign is to open the Mediterranean to Allied shipping, the obvious Axis countermove inevitably involves Spain as a highway to Gibraltar or the battleground on which Axis and Allied troops will fight for final control of that area. Spain has maintained military neutrality despite political affinity with Italy

and Germany. Economically, her role has been less unequivocal. Spain's final place is likely to be determined less by inclination than by circumstances and geography.

It is when the final stage of the battle for Tunisia is reached that an Axis rejoinder is expected, and when the predicted Spanish "stab in the back" may materialize.

"Surpluses" for the Axis

Since the beginning of this war, the Iberian peninsula has been an economic battleground. Spain has provided the Axis with strategic minerals and with food. Because of the failure of Franco's regime completely to rebuild the Spanish economy after the civil war, the drain upon her raw material supplies has had less effect upon the national economy than has the shipping of "surpluses" of grain and olive oil to the Axis.

Spain has important tonnages of tin, copper, tungsten, lead, zinc, iron, and mercury available for sale to the Axis, and these materials have been flowing to German war industries ever since the war began. In exchange, Germany has managed to provide finished manu-

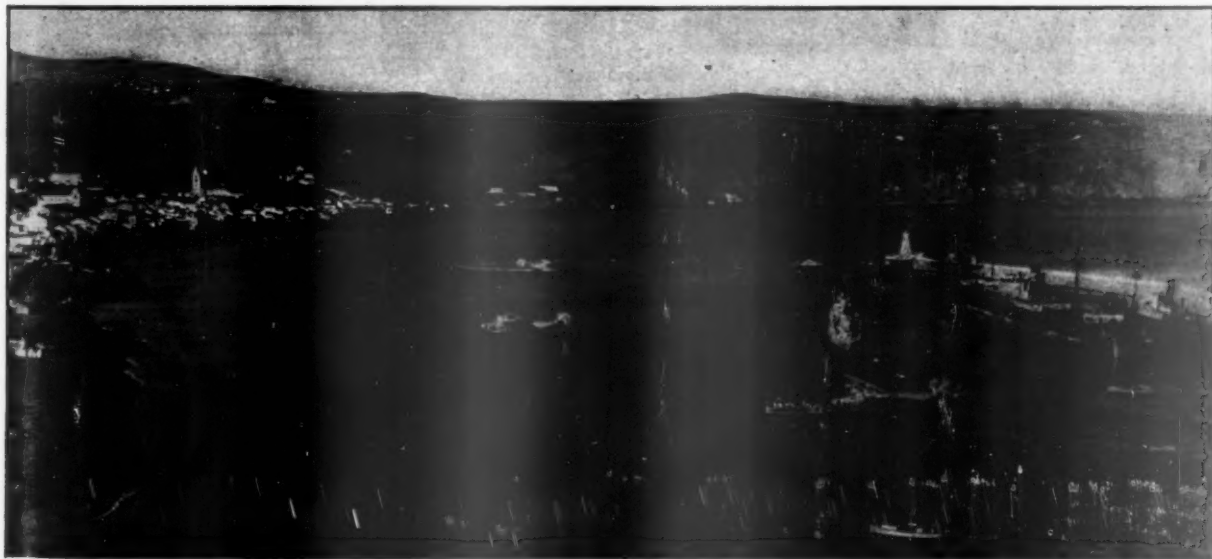
factured products, but not in quantities capable of balancing the trade, and it is generally believed that not only has Spain liquidated her civil war debt to Germany but also has now sizable claims upon the Reich.

In addition to minerals, Spain has provided the Axis with wool, olive oil, hides and skins, wheat, and citrus fruits. The effect of this trade has been to create shortages beyond the control of rationing authorities with dangerous inflationary effects on the economy. The cost of living indexes available from both official and unofficial sources tell the same story with differences only in degree. Items, the costs of which have advanced several hundred points at official rates, may in fact be unavailable or available only on the black market at many thousands of points above the index base.

Strain on Transportation

Spanish railroads have placed as many locomotives and freight cars in service as were in use before the civil war, but the condition of equipment and roadbeds is so deteriorated that operations are both sporadic and inefficient. The severe lack of liquid fuel, which has forced the introduction of producer-gas units in essential vehicles and cleared the road of all other traffic, has created serious distribution problems beyond the capacity of the railroads to solve. It is frequently reported that foods available in producing areas are rotting while cities and isolated towns face starvation. Current reports indicate that military movements have brought normal civilian travel and movements of commercial goods to a standstill.

Spanish industry has maintained close ties with Axis cartels and, particularly



War made Lisbon a boom town. Mecca for refugees from Hitler's Europe, way-station for travelers flying the commercial airways to Britain, and port for ships bearing

goods to Spain and Switzerland, Lisbon may yet be drawn into the vortex of the war by virtue of Portugal's location on the strategic Iberian peninsula.



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in the chemical field, has produced almost exclusively on German order. Other manufacturing activities have operated under difficulties occasioned by the continued imprisonment of many thousands of skilled workers who fought Franco's armies during the civil war.

While the country is literally overrun by German and Italian agents seeking every portable economic contribution Spain can make to the Axis war effort, and many thousands of Axis technical experts are believed to have remained in key posts since the Spanish war, the United Nations have likewise succeeded in purchasing important quantities of critical materials, which would otherwise have aided Rome and Berlin.

Economic Countermoves

Ever since the war began, a few Spanish and Portuguese ships have plied regularly between American and Iberian ports carrying cork and other commodities needed here and returning with goods not likely to be forwarded to the Axis and carefully watched after arrival by American officials. How important this largely under-cover economic warfare has been—how it may actually have influenced the course and duration of the war and of what value it has been to our own industry—will not be known until the conflict ends.

From the Axis viewpoint, the Iberian peninsula would be an economic asset if its occupation could be achieved without disruption of its already unstable economy. Any armies operating with Spain as their base would be forced to rely almost entirely upon outside sources for supplies unless a ruthless policy of looting was pursued. Of immediate practical importance would be the quantities of critical materials held in Spain as bargaining tools.

Government stores of food—which do not exist officially—would fall to the occupying forces. But most of all, the Spanish merchant fleet would prove immediately useful in the battle of the Mediterranean. Most of Spain's fleet of about 900 ships, totaling 1,000,000 tons, have been little used since the war cut off foreign markets. Despite their poor condition, they would perhaps turn the balance if placed in service on the ferry route between Sicily and Africa.

The Time for a Decision

It is considerations such as these that may determine the outcome of the African war. Should Spain elect or be forced to join the Axis war machine, the threat to the Allied position in North Africa would be extremely serious. Until the issue is decided in Tunisia, Spain may continue to walk the fence between the two camps. When the outcome of that battle is clear, the time will have arrived for Spain to declare her position.

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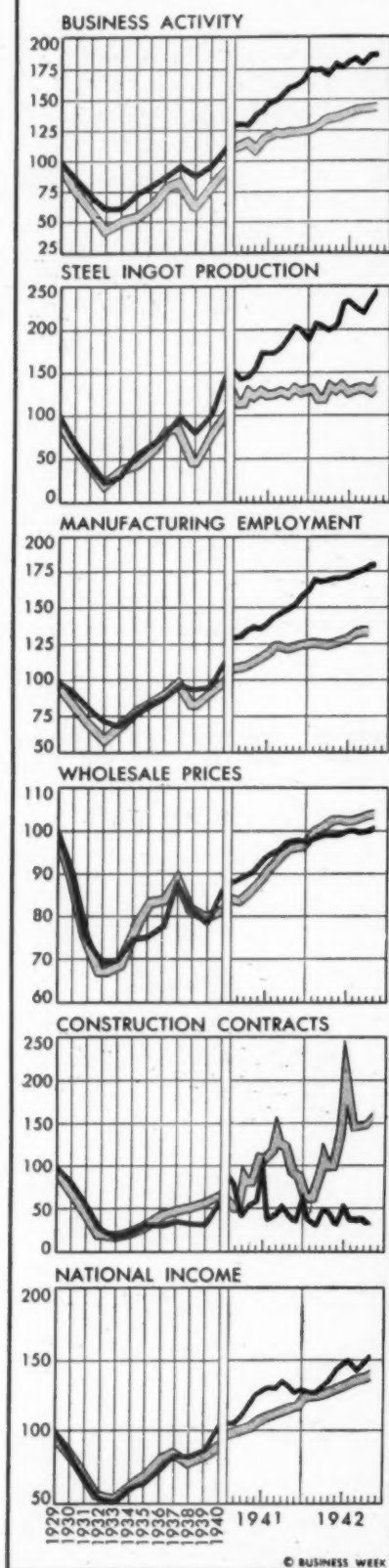
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CANADA

Ceilings Weaken

Ottawa faces the unhappy necessity of subsidizing meat and rationing more products to hold prices, avert bonuses.

OTTAWA—Price control officials are wondering whether retail price subsidies on tea, coffee, milk, and oranges (BW—Dec. 12'42, p91) will achieve the aim of preventing a rise in living costs during January that would necessitate a wage bonus boost on Feb. 15. Although Finance Minister Ilsley is prepared to spend \$40,000,000 of treasury funds in subsidies to lower living costs and avoid this inflationary move, insiders believe additional measures will be necessary.

Most distasteful prospect for the price control agency is the need to extend price subsidies to meats through either the packers or the retailers. It is generally believed that the government will have to pay part of the people's meat bill to avert the added wage bonus payment.

• **Index Nears Bonus Level**—The living cost index, which advanced 0.8 during November, has only 0.3 to go this month to require a further swelling of pay envelopes in February. Belief is that the dreaded index advance can be prevented only by bonusing meat costs to consumers and by restricting consumption of butter through rationing. There is some doubt that even these measures could block the upswing in food costs.

Chief impediment to including meat in the new bonus plan appears to have been public objection to payment of subsidies to packers while the alternative involved voluminous accounting work if retail prices were to be bonused. In addition to loading the retail trade with additional bookkeeping, a substantial enlargement of price control machinery would be required.

• **Ceilings Shattered**—While Ottawa is freezing some food prices in an effort to halt inflation, it is abandoning original base period price ceilings in the process. The price ceiling law, effective from Dec. 1, 1941, fixed prices at the September-October level of that year. During the first year, there have been numerous but reluctant departures from the original ceilings. In many cases manufacturers and processors have been allowed percentage advances from the base, and the distributing trades have been permitted to add customary mark-ups to their advanced-cost prices.

The new food subsidies signal an acknowledged departure from the original price base and fix the level of

pivotal prices as of Nov. 1 this year. Observers believe that additional departures from the old ceilings are a prospect on consumer commodities that have a less direct impact upon the cost of living index. Price Control Chief Donald Gordon has stoutly resisted the introduction of flexibility into the Canadian price structure but has been compelled to give ground gradually. A few days ago he admitted to the retail trade that increasingly controlled markups on advanced-cost prices would be substituted for base period ceilings.

• **More Rationing**—Current efforts of Canadian price controllers to stem inflation will have the effect of weakening their resistance to the extension of food products rationing. Recently there was an unofficial promise that butter would not be rationed for at least six months. It is now believed that restrictions on consumption are only a few weeks away.

Reduction in butter consumption is regarded as one method of controlling the living cost index. So far rationing is restricted to sugar, tea, and coffee. The swing toward additional rationing is accelerated by increasing scarcity of consumer supplies.

Price control authorities are attempting conservation by restricting the distribution of some food lines, especially canned goods, and by additional cuts in luxury lines of clothing and other commodities, but the most pressing problem in the wholesale and retail trades is stock maintenance. Shortages are becoming severe in cheaper lines of staple commodities.

• **Postwar Politics**—Last week Canadians cast an eye toward the postwar period by setting up a new political party designed to counteract the possibility of a postwar swing to the political and economic left. The allegiance of most Canadians has been divided in the past between the middle-of-the-road Liberal party (which has held office since 1921 except for the five-year period 1930-35) and the Conservative party, which lost public favor by proposing a new deal program on the NRA pattern in 1935. In recent years a socialist political organization, Cooperative Commonwealth Federation, has loomed as a potential alternative to the Mackenzie King Liberal government in any postwar political reaction.

To head off the threatened advances of socialism, the Conservatives in a national convention in Winnipeg reorganized themselves into a new national party labeled Progressive-Conservative and chose as their leader John Bracken, for twenty years provincial premier of prairie Manitoba. The new political alignment is aimed in the first place at putting more punch into Canada's war effort and in the second place at offering a postwar program to promote social reform while maintaining established institutions and combating socialism.

PRODUCTION

Aero Primer

Allison penetrates the fog of aerodynamics for armchair strategists with simplified text on how superchargers work.

Of the variable factors that will determine air superiority in the war, none has taxed the comprehension of the armchair strategist so much as the inability of a given plane to perform equally well at high and low altitudes. He knows vaguely that the answer lies somewhere in the mysterious realm of supercharging, but in the flush of an Allied success or the despair of an Axis victory, he is likely to overlook the importance of the contribution which supercharging has made to that momentary triumph or defeat.

• **Layman's Guide**—To overcome some of these hot and cold flashes on the home front, the Allison Division of General Motors Corp. has prepared, principally for the guidance of typewriter strategists who whip the news into shape for the armchair strategists, a layman's primer in aerodynamics, with emphasis on the function of the supercharger, its advantages, and its limitations.

To say that airplane engines burn gasoline is to ignore an important component of the combustion process—air. It takes about 14 lb. of air mixed with 1 lb. of gasoline to achieve so-called complete combustion. Upon how much air can be pushed into the cylinders depends the power of the plane in flight. At sea level, a given weight of air occupies, say, 100 cu.in. As altitude increases, the weight of the air decreases, so that at 10,000 ft. the same weight of air will occupy 135 cu.in.; at 30,000 ft., 268 cu.in.; at 50,000 ft., 659 cu.in.

• **Loss Charted**—In other words, a plane rising from sea level to the rarefied atmosphere of 50,000 ft. encounters in a relatively few minutes a weight of air that occupies more than 6½ times as much space as that found at sea level.

To illustrate what will happen if the plane is not prepared for that change, Allison charts the loss of horsepower of an unsupercharged 1,000-hp. engine as it climbs. At 10,000 ft., horsepower drops to 702; at 20,000 ft. it is 470 hp.; at 50,000 ft. it is only 35 hp. To compensate for the effect of altitude, the plane designer embodies a supercharger in his power plant to compress the intake mixture and drive it into the engine.

• **Air Compressor**—The supercharger is a centrifugal-fan type of air compressor,

operated at high speed to take enough air at the lower density of the higher altitude, and force it into the engine at the same rate (measured in weight) as the engine receives at sea level.

It is possible to design and build a plane that would serve all military purposes, but it would be mediocre in all operations and always would meet the enemy's specialized aircraft under a handicap.

• **Powered by Engine**—Supercharging equipment is heavy, bulky. Its inclusion in a plane design tends to reduce the amount of armor, armament, ammunition, or gasoline the ship can carry. Further, power must be taken from the engine to drive the supercharger, reducing the power behind the propeller by that much.

Not all planes, aerodynamically speaking, can accommodate all types of supercharging. Some of the more complicated equipment is so bulky with relation to the trim lines of a small fighter craft that installation of it would necessitate redesign of the fuselage.

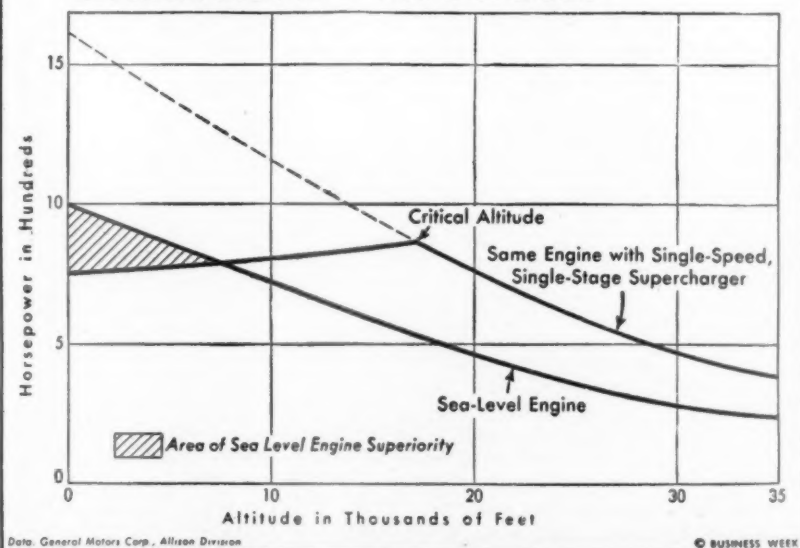
• **Eight Types Studied**—All high-horsepower aircraft engines have superchargers of one type or another. Allison

charts the performance of eight types recognized as having important differences. Of these, the simplest is that provided for the so-called sea-level engine. The supercharger in this case has capacity only sufficient to provide the air required to achieve the horsepower rating determined for the engine at sea level and a few hundred feet above. A 1,000-hp. engine so equipped loses power rapidly as it rises. At 10,000 ft., its horsepower has dropped to 700; at 20,000 ft. it is well under 500; and at 35,000 ft. it is scarcely 250 hp.

A comparison between performance of the sea-level engine and that equipped with the single-speed, single-stage supercharger (chart, below) illustrates the effects achieved by different types of blower equipment. In the second case, the designers having determined that maximum horsepower is required at 17,500 ft., the same supercharger has been speeded up to deliver, at that altitude, the same weight of air as was available to the first engine at sea level.

• **Boost Controls**—But to drive the supercharger at the higher speed requires more power, and this must be deducted from the power previously available for driving the plane. Theoretically, it will be noted, the single-speed, single-stage supercharger will develop between 1,600 hp. and 1,700 hp. if the throttle is opened fully at sea level. Such over-

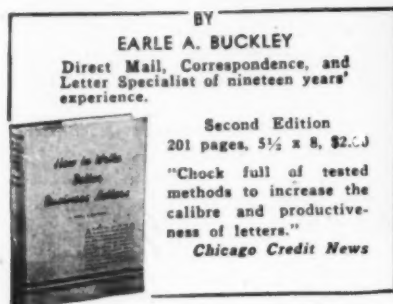
SUPERCHARGING — WHAT IT DOES



Different types of supercharging achieve different horsepower results with the same basic airplane engine. Although the so-called sea-level engine, supercharged for maximum power at sea level or a few hundred feet above, loses horsepower steadily as it climbs, it retains more push up to a certain altitude than the same

engine supercharged for optimum power at 17,500 ft. The broken line denotes the result of overboosting in the single-speed, single-stage, supercharged engine. Automatic boost controls prevent this climb in horsepower in order to avert damage to the engine through overheating of the intake mixture.

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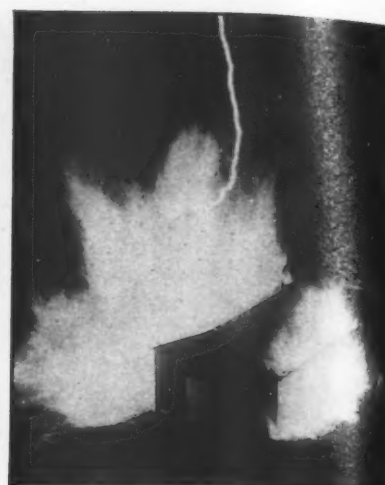
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LIGHTNING UMBRELLAS

Fashioned with a minimum of strategic materials, a wire "umbrella" to guard explosives plants and oil storage centers from lightning has been developed by Westinghouse Electric & Mfg. Co. Man-made lightning streaks toward a model plant to show



the effectiveness of the device, which consists of a grounded steel wire strung above the building to be protected and anchored on tall wood poles at each end. The unprotected model (right) didn't fare so well. Some war industries and one large ordnance plant already are being guarded by the umbrella method.

boosting could cause serious damage to the engine, however, because compression raises the temperature of the air intake and involves the danger of detonation and preignition. To avert this, automatic boost controls are provided.

The single-speed, single-stage supercharger can be used effectively for light airplanes in which loss of power at take-off is not too important up to critical altitudes of approximately 20,000 ft. (Critical altitude of an airplane is the altitude at which maximum speed in level flight is obtained. Service ceiling, with which critical altitude often is confused, is the maximum altitude at which the plane can maintain a rate of climb of 100 ft. per min.)

• **Each Has Function**—Other variations in supercharging illustrated in the Allison primer are the two-speed, single-stage supercharger with mechanical clutch; the variable-speed, single-stage supercharger with hydraulic clutch; the two-stage supercharger with mechanical clutch; the two-stage supercharger with hydraulic clutch; the two-stage supercharger with hydraulic clutch and intercooling; and the turbosupercharger with intercooling, each with its peculiar function.

Turbo with intercooling preserves full horsepower to a higher altitude than any other method, and the most power at the highest altitudes. Turbo is regarded as the most economical of all methods of supercharging, because it derives its power for the second stage from the exhaust blast rather than from the crankshaft. But it is bulky and heavy,

factors that must be taken into consideration in the design. Intercooling, a process for chilling and further condensing the air by means of radiators after it is compressed, adds drag.

• **Performance Contrasted**—Why the weight factor commands so much attention is illustrated in performance charts of four fighter planes, weighing respectively 5,000 lb., 6,000 lb., 7,000 lb., and 8,000 lb. On the take-off, the lightest of the four leaves the ground after a 550-ft. run, the 6,000-lb. plane after 725 ft., the 7,000-lb. ship after 975 ft., and the heaviest after 1,275 ft.

The light plane, superior also in maneuverability and speed of climb, could make a turn in 1,000 ft., whereas the heaviest would require 2,200 ft. and more than twice as much time. Leaving an airfield simultaneously to intercept an enemy bomber, the four planes would establish contact with the hostile ship at widely varying times, due to the variation in their weights.

• **Value Diminished**—On the other hand, if the light plane, upon establishing first contact with the enemy, is handicapped by lack of armor, armament, ammunition, gasoline, proper instrumentation, and leakproof tanks—all weight factors—its interception value will be greatly diminished.

How to balance all these factors in a plane to meet the peculiar requirements of a particular mission is the day-to-day problem with which the designers grapple. It may baffle the layman, but it should increase his respect for the job they are doing.

Tooled for War

Machine tool industry is hit by epidemic of cancellations after its greatest year. Full arms production near.

In Cincinnati, Cleveland, and Detroit—midwestern centers of the humming machine tool industry—there were signs of relief early this month. After two years of steady expansion, followed by two years of veritable mushrooming, the industry is beginning to catch up with orders, and cancellations are developing rapidly. The industry feels its rapidest growth is behind, that the immediate future will be distinctly less hectic.

• **Backlogs Until Summer**—The recession has been progressing quietly for two or three months. It burst into attention when ordnance orders were reduced sharply in many categories during November (BW—Nov. 21 '42, p. 62). Cancellations began arriving in machine tool company mail.

The trend should not be apparent in production. Machine tool backlogs still average six or seven months, and the pressure for deliveries has not diminished. Tool output should continue firm until next summer. By then, preparation for mass armament output will be very largely finished, and the industry will revert to normal demand engendered by new programs, many experts believe.

• **Precision Tools Tight**—The ordnance cuts were a body blow to the machine tool backlogs, knocking out production of large numbers of new milling machines, surface grinders, drills, some broaches, and shell lathes. For every four new orders, there is now one cancellation. These cancellations are being offset somewhat by increases in orders for single-purpose precision machinery, needed for expanded aircraft and naval programs.

Internal grinding machines, thread grinders, boring equipment, and other kinds are still hard to get. Multiple spindle machines, the ingenious devices that bore or tap holes a score—or five score—at once, are as tight today as when the armament program began.

• **New Record Set**—Despite November-December softness, the machine tool industry is winding up its greatest year. Deliveries are estimated to run around \$1,300,000,000 for the 12 months, compared with the previous record of about \$770,000,000—established in 1941.

The shape of things to come, however, is pointed by the past two or three months' new orders, which are estimated to run no more than \$80,000,000 to \$100,000,000 a month,



Weatherhead sells parts to every airplane manufacturer in America.

Weatherhead



Tanks, combat cars and trucks depend on Weatherhead for vital parts.

Heads the Production Line



Ships, too. Every type of American mobile striking unit looks to Weatherhead!

DECEMBER 7th, 1941! Since that black day American industry has achieved the incredible in turning out the needs of war. In the forefront you'll find the name Weatherhead, producing parts for 'planes, tanks, trucks and ships.

Today, fully converted to war work, Weatherhead plants throughout the country are turning out valves, fittings, flexible hose, hydraulic cylinders and scores of other vital parts at the rate of millions every day!



WEATHERHEAD

Look Ahead with

The Weatherhead Co., Cleveland, Ohio • Branch Offices: Detroit, Los Angeles, New York and St. Louis

WORLD'S LARGEST MANUFACTURER OF FITTINGS AND FLEXIBLE HOSE

AMPCO CASE HISTORIES

270° *degrees below zero!*

(4 times as cold as
the stratosphere)

yet **AMPCO METAL'S**
strength was unimpaired

Colder than cold! 270° below zero Fahrenheit! Bronze parts in a machine made by a well-known pump and compressor manufacturer were subjected to this intense cold in valve applications — and the Ampco Metal stood up satisfactorily — its qualities unimpaired after months of service.

Laboratory tests have shown that the tensile strength and elongation of Ampco Metal increases as the temperature drops — important under certain service and installation conditions.

When trouble is encountered due to metal wear, deformation and fatigue, try parts made of Ampco Metal. Twenty-eight years of "know how" lie behind the alloying of this amazing bronze. Literature will be sent you on request. Ask for "File 41—Engineering Data Sheets."

AMPCO METAL, INC.

DEPARTMENT BW-12

MILWAUKEE, WISCONSIN

**AMPCO
METAL**



THE METAL WITHOUT AN EQUAL

figures that may be reduced a fourth by cancellations. Thus, the tool industry may wind up its 1943 output total on the minus side of a billion dollars. However, latest reports on deliveries still show monthly shipments in excess of \$125,000,000.

• **Preparations Almost Complete**—The production capital of tools and tool equipment, Detroit, reports production appears to have passed its peak in September or October. Delivery promises of 12 to 14 weeks, customary last summer, have been cut down to about half that time today, and idle time can be found spotted through some tool shops.

The situation has significant implications for a nation at war. It means the preparatory job for mass production is at last over the top, that the industrial stage is rapidly approaching complete setting for the turnout of weapons on the greatest scale in history.

Helping the Boss

Suggestions by employees boost war production, cut the costs, and ease labor relations in many industries.

The National Association of Suggestion Systems held its first fall conference in Chicago last week for the dual purpose of swapping experiences and ideas, and persuading some of the 3,500 invited companies to join the present roster of twelve members.

• **N.A.S.S. Is New**—Employee suggestion systems in one form or another are almost as old as industry, but not until last summer did they get around to forming an association. Reason for this may be that in the past, 95% of the suggestion systems were either still-born or died within the first year—mostly for lack of consistent and powerful plugging.

Within the past few years, management has become increasingly aware of the potential gold mine of good ideas in workers' on-the-job experience. Suggestion systems have proved the most practical means of bringing these ideas out in the open where they can be considered, and, if practical, put into operation.

• **Systems' War Boom**—Current necessity of using every possible means of speeding war production, plus the impetus of government's War Production Drive (BW—Jun.20'42,p18), has cultivated a bumper crop of suggestion systems. Of the 1,561 systems now flourishing in American industries of all kinds, 1,400 have been established since Pearl Harbor. To date, 1,150 of them have tied in with labor-management committees sponsored by the War Production Board.

Managers of successful systems, like

E. S. Taylor of the Pullman Co. (president of the N.A.S.S.) and H. C. Marmaduke of the Illinois Central Railroad, contend that suggestion plans are almost a form of dynamite. Properly handled, they not only pay for themselves in reduced costs and increased production, but also are a tremendous influence on labor relations. A suggestion system bungled, however, is worse than none at all because of resultant dissatisfaction and resentment among employees.

• **Items to Watch**—Cardinal points in any system are:

(1) **Anonymity.** Most systems provide forms on which the suggester is identified only by number. This shields an employee from possible embarrassment in case his idea is rejected and assures impartial consideration.

(2) **Generosity.** Best plan is to provide a substantial minimum award—usually \$5—and no maximum. Many companies base the award on 10% of the first year's savings resulting from the idea.

(3) **Strong management backing.** In a company of any size, administering a suggestion system is likely to be a full-time job for a man who not only knows the company's business thoroughly but also has an understanding of the employees' point of view.

• **Custom-built Plans**—Constant promotional effort is necessary to keep a steady flow of ideas moving into the suggestion boxes. Some of the more successful systems, particularly in large companies, are those set up by industrial engineering consultants. But other firms get along equally well with homemade plans.

That suggestion systems are well worth the effort is proved by the volume of ideas received by typical companies, and the rather spectacular sums awarded to workers. At Illinois Central, for example, 7,500 out of the 69,000 ideas submitted within the past four years were adopted. Awards ranged from the \$5 minimum to \$2,605 paid to a storehouse stockkeeper who suggested replacing malleable castings with forgings, on freight car wheel trucks. The idea saved \$26,000 in the first year of operation.

• **A High Average**—Pullman Co. has paid out \$53,000 to employees within the past 18 months for 4,600 ideas adopted out of 42,000 submitted. Fisher Body Division of General Motors claims that 22% of its employee suggestions prove acceptable and ultimately are adopted—a comparatively high percentage, perhaps due to the fact that Fisher Body's war work differs radically from its normal peacetime operations.

Suggestions are received covering every conceivable type of job: production control, payroll, material handling, maintenance, standards, safety, and salvage, as well as actual assembly-line ideas.



PREDICTABLE PERFORMANCE

Our guarantee of predictable performance of our TENUAL Aluminum castings is due to the combined efforts of our research engineers, careful supervision and unmatched craftsmanship. Add to this over thirty years of experience in doing one thing well, and you realize why we are one of the largest producers of sand and permanent mold aluminum castings.

The name "TENUAL" stands for quality sand and permanent mold aluminum castings. When the time comes for us to produce castings for your peacetime needs, TENUAL Aluminum castings will be equally as efficient as they are in today's war equipment.

TENUAL

ALUMINUM CASTINGS

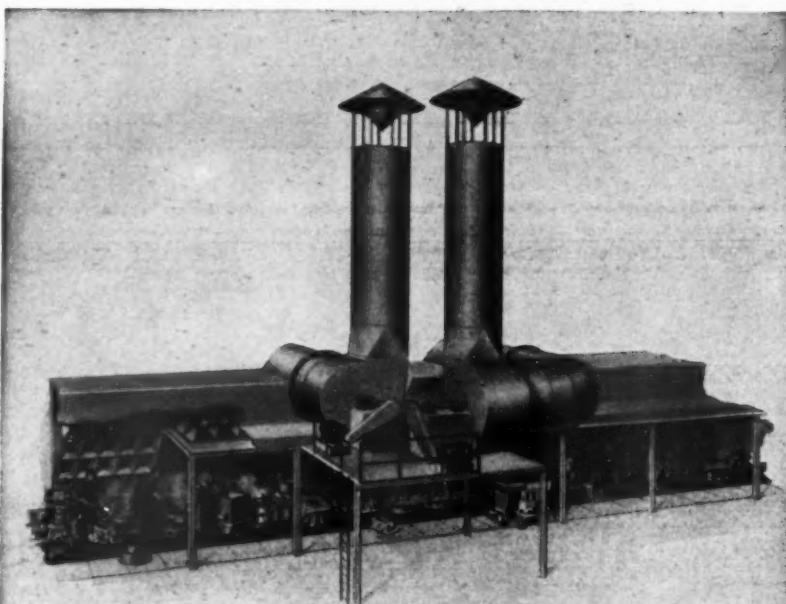
Photograph shows a load of castings ready for heat treatment . . . Note size of castings in comparison with man at left.

THE National BRONZE & ALUMINUM FOUNDRY CO.
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● Because they catch the acrid and nauseating fumes and smoke resulting from knocking cores out of aluminum and magnesium castings, and exhausts them outside without contaminating the air in the building,—Bartlett-Snow Fume Control Systems speed the manufacture of vital parts needed to maintain airplane supremacy over the battlefronts.



WAR BOND BUYERS
AVERAGE PAYROLL
DEDUCTION **14½%**

As illustrated in the cutaway sectional view above, these systems employ Bartlett-Snow's highly efficient pyramidal shaped collecting orifices, mounted along the backwall (U. S. Pat. 121,704, June 30, 1940) and overhead in a canopy, which extends out some distance beyond the knockout grating. Castings to be knocked out are dumped on the grating from an industrial truck. The cores are dropped through the grating to a collecting hopper . . . fumes and smoke are exhausted through the orifices. The men rarely have occasion to stand between the grating and the backwall—work in a clean cool air stream—and have no restriction in their efforts to "Beat the Axis". The C. O. Bartlett & Snow Co., 6200 Harvard Avenue, Cleveland, Ohio.

BARTLETT-SNOW

CONVEYING, ELEVATING AND PROCESSING EQUIPMENT

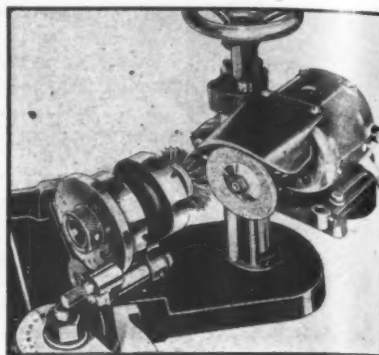
★ ★ ★ ESTABLISHED 1885 ★ ★ ★

NEW PRODUCTS

Versatile Tool Sharpener

The new Hilco Universal Cutter-Grinder occupies a space of only 21x17 in. on a workbench, yet promises to sharpen any concave, convex, helical, straight, tapered, angled, or special milling cutter up to 6-in. diameter, any reamer up to the same size, and any circular saw up to 18-in. diameter.

It is built by Berco Mfg. Co., 429 W. Superior St., Chicago, with a special index dividing head which has seven index



circles of micrometer-spaced holes or stops in multiples of 2, 3, 4, 5, 6, 7, and 13 to assure uniform grinding on practically any number of teeth or cutting surfaces. It is also equipped with a special interchangeable table or flat-bed attachment (not shown in the illustration), which implements its claimed ability to handle "any conceivable simple or compound angle" on a wide range of cutting tools.

Coal Pile Fire Prevention

Several years ago the Coal Specialties Co., 50 Church St., New York, brought out the "Hot Spot Indicator" to provide a visual warning when a "hot spot" develops by spontaneous combustion in a reserve pile of soft coal like one of the thousands stored up at government best against this winter's fuel and transportation shortages. The indicator goes into action when a temperature of 150 F. is reached at a given point in a pile, giving its warning well in advance of actual fire.

To supplement the indicator's warning and cool a hot spot, the Liquid Carbonic Corp., 3100 S. Kedzie Ave., Chicago, has developed a new method of applying its Red Diamond Brand Dry Ice, or any other brand of solid carbon dioxide for that matter. Briefly, the method utilizes a group of long, home-made, pointed, perforated 3-in. pipes for which the corporation will furnish the design. The pipes are driven into and around any hot spot and filled with intensely cold, crushed dry ice. The ice

cools the hot spot as it sublimates into a blanket of carbon dioxide gas, heavier than air and a fire extinguisher in its own right.

Skin Protection

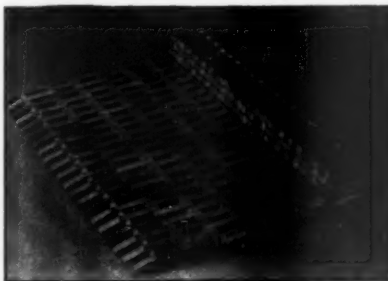
Newest line of industrial skin creams and lotions to protect a worker's skin against industrial dermatitis is "M.S.A. Fend," distributed exclusively by Mine Safety Appliances Co., Pittsburgh. There are six types of Fend, ranging from a water-soluble cream for setting up a barrier to sticky substances like asphalt and printing ink to a water-repelling lotion, which is claimed to be proof against chemicals entering into the manufacture of military explosives, wood preservatives, etc. Each type forms an invisible film on the skin, which can be removed with mild soap and water. It is emphasized that the creams are designed to prevent skin troubles, not to provide cures.

Commercial Vehicle Record

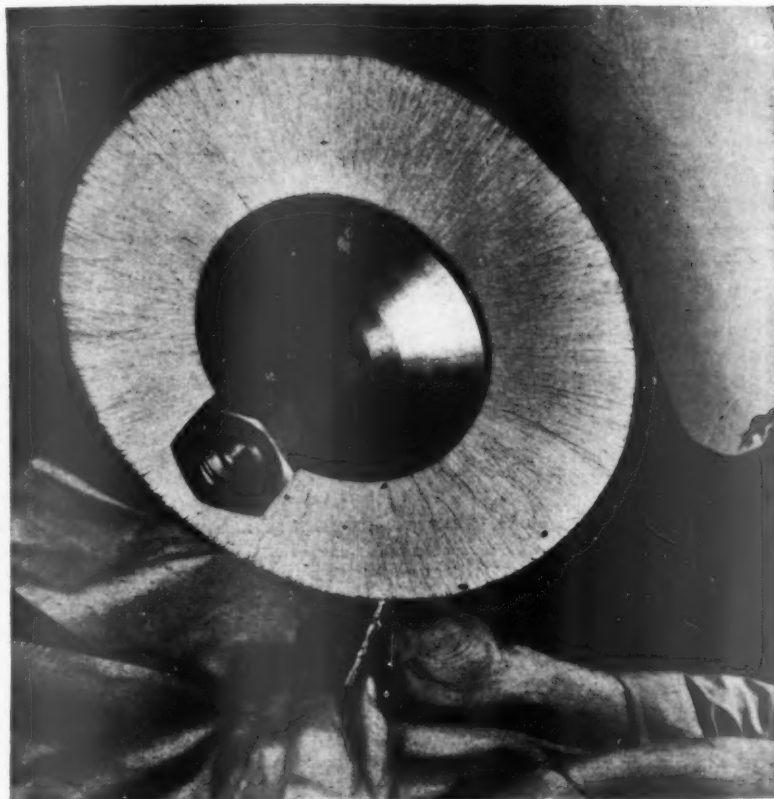
To enable commercial vehicle owners to be sure that they are keeping all the information required by the Office of Defense Transportation for the issuance of Certificates of War Necessity, the Fruehauf Trailer Co., Detroit, has worked out a compact new ODT Daily Record Form for drivers. It is being printed and bound in books of 50 perforated sheets, and is to be distributed without profit at 24¢ per book, plus postage, regardless of the number purchased.

Wood Link Matting

Like rubber link matting, which it is designed to replace for the duration and



after, the new Flexible Wood Link Matting, developed by the American Mat Corp., 1760 Adams St., Toledo, can be rolled or folded up for easy handling and cleaning. It comes in three stock sizes—18x32, 24x38, 30x44 in.—and can be manufactured in special widths up to 36 in., and any length. Since wood is not affected by oil, grease, or water, the matting is expected to provide safe footing for workers in machine shops as well as in food plants, restaurant kitchens, soda fountains, etc. The ends are beveled in order to reduce the danger of tripping.



The brush-off that steps up horsepower—thanks to O.B.A.

TO EXTRACT every last ounce of horsepower from an aircraft engine, its hundreds of moving parts must be polished—

- Polished to eliminate tool-marks, scratches and other stress concentration points
- Polished to break sharp corners and form radii
- Polished to dig out impurities, expose imperfections

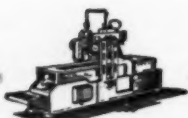
But how to polish great numbers of irregularly shaped pieces—many with sharp angles and deep recesses—accurately, quickly and economically?

That was the problem presented by a major engine builder to Osborn men conducting an O.B.A. (Osborn Brushing Analysis) in the plant. Their recommendation was power-driven "Fascut" Tampico sections, soft but tough, and chemically treated to prevent "flutter" and "knifing", to hold abrasives better, cut faster and wear longer. So successful were these Osborn brushes in blending metal surfaces, rounding corners and exposing minute flaws that brushing with Tampico sections today is virtually standard practice throughout the entire industry.

The Osborn Brushing Analysis (O.B.A.) is available now as an engineering service for increasing production, improving quality and cutting costs in essential war industries. After Victory this same service will be available to all. For details about this service and help on specific problems, get in touch with the Osborn Brushing Specialist in your district, or write *The Osborn Manufacturing Company, 5401 Hamilton Avenue, Cleveland, Ohio.*



WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY



An Important War Time Suggestion To AMERICAN MANUFACTURERS

Production machinery of all kinds is working faster and harder today than ever before; but it cannot be expected to keep operating indefinitely without proper care—regular lubrication and maintenance attention.

With war demands constantly piling up, labor scarce and 24 hour a day operation imperative, there naturally is a strong temptation to cut corners in lubrication and maintenance. This may increase production temporarily—at a much greater sacrifice of output when machines break down later on.

If your machines are equipped with Timken Tapered Roller Bearings—as most modern factory, mill and mine equipment is—you can expect it to see you through the emergency and beyond it. Simply make sure that it is properly lubricated and thoroughly inspected at regular intervals. The endurance and long life built into Timken Bearings will do the rest.

Don't hamper the war effort by neglect of your equipment. Most of it is difficult to replace; some of it may be impossible to replace.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO



TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

LABOR

Escalator Brake

NWLB clamps a lid on wage increases anticipated in contracts tied to cost-of-living or production indexes.

New regulations have been issued by the National War Labor Board on wage adjustments and by the Commissioner of Internal Revenue on Christmas and year-end bonuses.

• **Six New Orders**—Latest wage and salary (under \$5,000 a year) rules from NWLB bring the number of orders in effect to 22. The first 16 general orders (BW—Dec. 5 '42, p60) have been operative since last week. Only one of the latest regulations, General Order No. 22, is of direct concern to private employers.

General Order No. 22 provides that no escalator-type clause, gearing wages to cost-of-living or production indexes, in any labor agreement covering wages and salaries that fall into NWLB jurisdiction may be enforced if the adjustment would result in a compensation rate in excess of 15% above the average rate prevailing Jan. 1, 1941.

• **Federal Adjustments**—Orders numbered 17 through 21 delegate to designated federal agencies authority to make wage and salary adjustments for certain classes of their employees, subject to NWLB review. Agencies so authorized are the Office of Price Administration, the Navy Department, the Federal Reserve System, the United States Employment Service, and the Interior Department.

For the guidance of employers who contemplate giving Christmas or year-end bonuses, the Commissioner of Internal Revenue listed four types of cases where his prior approval is not required. Employers may go ahead with the payment of such bonuses where:

(1) The amount to be paid in 1942 is not greater than the amount paid to the same employee, or an employee occupying the same position, in 1941.

(2) Before Oct. 3, 1942, the employer had entered into an enforceable contract with the employee to pay him in 1942, (a) a bonus of a specified amount, or (b) a bonus calculated in a specified manner, the amount of which was determined on or before Oct. 3, 1942.

(3) It has been the settled policy of the employer over a period of at least two years to pay bonuses calculated on a fixed percentage of the salary of each of the employees of any group, provided the fixed percentage is not increased in 1942. (An increase in the amount of

We're assuring
SAFE ARRIVAL with
Acme Steelstrap



Simple to handle, Acme Steelstrappers are easily and speedily operated by women workers! The strapping tool pictured tensions, seals and cuts the strap with a single movement of each of the two handles.



★ Priority rated orders for Acme Steelstrap and strap-applying equipment are shipped promptly... thus helping manufacturers meet close shipping and sailing dates! Complying with all Federal Strapping Specifications, Acme Steelstrap assures "Bound to Get There" arrival of important war products... conserves container material... speeds handling and cuts costs by making skid shipping practical... reduces cargo space through the medium of baling compressible items such as military textiles and pulp. For every type of package... box, carton, crate, bale, bundle or skid... and for bracing carload loadings, there is a type and size of steel strapping to protect the items of war. And for speedy strap application, you'll need Acme Steelstrappers... the fastest, one-piece strapping tools ever built. Get in touch with the nearest Acme office.

FREE HELPFUL LITERATURE.

ACME PROCESS NEWS... regularly issued, interesting and well illustrated 12 page publication on the strapping and bracing of war shipments.

STEEL STRAPPING SHIPMENTS... describes methods of steel strapping a wide variety of shipping packs.

ACME UNIT-LOAD... 24 page picture-filled informative booklet on the bracing of carload freight.

ACME SILVERSTITCHERS... low cost machines for stitching all types of cartons with flat wire.



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PORTLAND (Ore.): 522 N. W. Davis St.

SAN FRANCISCO: 432 Bryant St.

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PROTECTS EMPLOYEES..

PROTECTS THEIR FAMILIES..

PROTECTS
AMERICAN WAR PRODUCTION

FOR DETAILS, WRITE



any employee's bonus due to an increase in his salary during 1942, without any change in the percentage, will not be in violation of this rule.)

(4) The bonus or other additional compensation is based on a fixed percentage of an employee's individual sales, provided the rate of such payment was fixed before Oct. 3, 1942.

• **Regional Head Named**—All other types of bonus payment require the approval of the Commissioner.

To the twelve previously named regional heads of Internal Revenue's Salary Stabilization Unit (BW-Dec.12-'42,p104), the Treasury Department has added J. F. Addor whose office will be in Room 2529 of the Internal Revenue Bldg. in Washington. Addor's office will have jurisdiction over employers whose businesses are located in Maryland, Delaware, Virginia, West Virginia, North Carolina, the District of Columbia, and Puerto Rico.

Working the Dole

Pennsylvania finds war work for its relievers. New system solves manpower woes and saves public funds.

Pennsylvania war contractors are getting a lift with manpower troubles under a plan whereby the state's Department of Public Assistance finds jobs for its relievers and then stakes them financially. More than 1,000 men had been thus placed by Dec. 1.

• **Began as a Test**—The idea of killing two birds with one stone—providing manpower, reducing relief rolls—began as an experiment last spring when laborers were supplied by the department to contractors on a Navy supply depot and an Army reception center. Demands from other employers followed, forcing adoption of a system.

Under the resulting plan, workers can be employed anywhere in the state, the department stake and expense grants keeping them until pay checks begin. First workers chosen were taken from files of relievers who had worked out their assistance on part-time public works jobs, thus establishing themselves as physically employable.

• **Aliens Eligible**—War Department permission to hire aliens from nonenemy countries on war projects greatly increased the department's list of eligibles and broke a deadlock that kept many such potential workers on relief since they were ineligible for WPA or war industry jobs. All relievers thus affected have filed their first citizenship papers.

Aided by U. S. Employment Service, the department finds all situations for its needy. County assistance boards se-

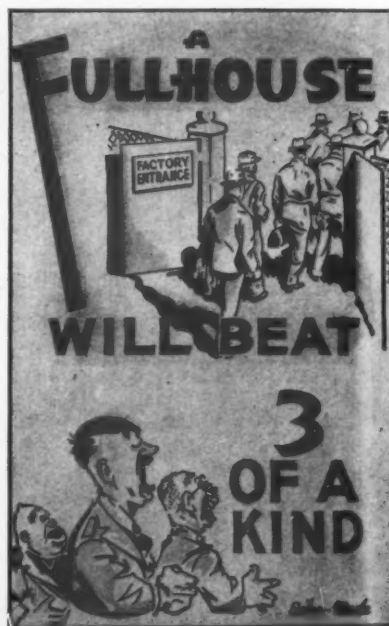
lect applicants, provide transportation and maintenance funds. Local boards in counties where such jobs are situated arrange living accommodations and make sure money is sent home to dependent families.

• **Average Stake: \$25**—When an unmarried man lands a job, he gets a grubstake large enough to sustain him until payday, and is stricken from relief rolls immediately. Married men, however, are assured their families will remain on relief until earnings are sufficient to sustain them.

The average grubstake is \$25 per man. Single men are required to repay it, but those with dependents are not. Since average relief payments range from \$40 to \$50 per family, department officials feel the stake is a fair bet.

• **Medical Treatment Given**—Other features of the program include rehabilitation of relievers, unemployable because of remediable physical defects, and county emergency funds for immediate assistance to needy applicants—such as money for clothing, equipment, or food.

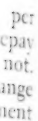
Although relievers have been placed on four war contract jobs and on the staff of one state institution, surprisingly few have returned to the dole when projects were completed. Relief authorities believe the system will get its big workout next year when the state's WPA program is wound up. Past experience indicates that about 9,000 cases will be added to the present load of 34,542 cases when work relief jobs end.



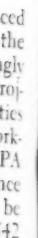
POKER STUFF

Employees at Eaton Mfg. Co., Cleveland, crack the whip on absentees via posters drawn by a truck driver from ideas submitted by fellow workers.

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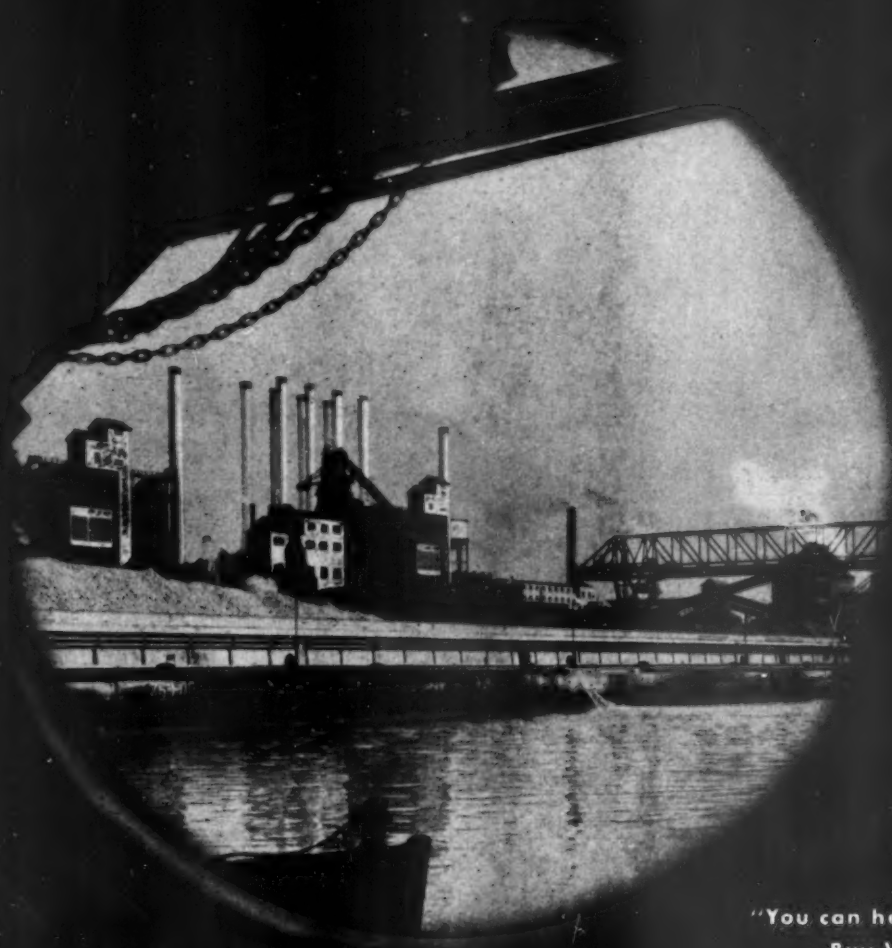
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ACKNOWLEDGMENTS

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"You can help win the war
Buy War Bonds"

Building for Industry

AT ALL POINTS OF THE COMPASS

Austin's Long Established Coast to Coast "Network" of Offices is helping Manufacturers who need simple factory additions or complex process plant facilities

The long needle of the war production compass points to sections of the country never before industrialized . . . sections that are now booming with activity.

Outlying farm lands are hearing the rumble of the bulldozers, the rat-a-tat of riveting hammers and the shriek of locomotives. War strategy has created a new industrial geography.

"BIG HOOK"—One of two hooks of 125 ton capacity, each installed in locomotive repair shops and engine terminal, designed and built by Austin Engineers for a well-known Eastern Railroad.



Within easy reach of these new productive centers, are long established Austin Offices which are serving industry by providing manufacturing facilities, branch plants and warehouses to increase efficiency, tap new resources and reduce costs.

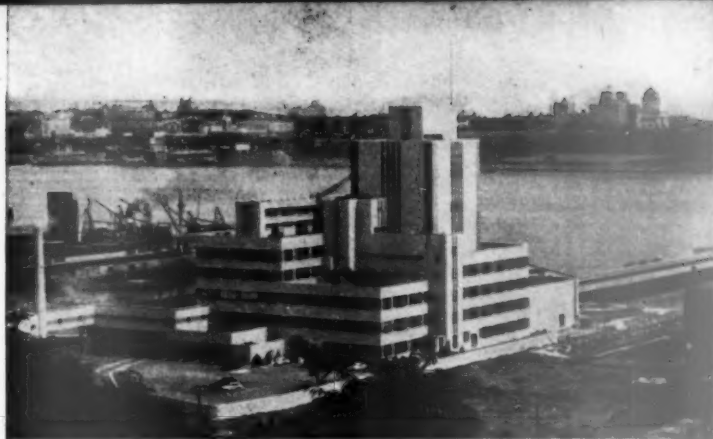
A NETWORK OF "LIAISON" OFFICES—War, with its demand for additional production facilities in widespread centers, brought many new problems. Some projects called for contract negotiations with several offices of an Owner's organization, wherever they might be located. Austin's Coast to Coast "Network," usually having an organization near the

...ect location, provided a "hookup" between each
the Owner's offices and near-by Austin Offices.
... these contacts included the co-operation of
Austin Staff in Washington.

VERSATILITY, AN ASSET—Flexibility of organiza-
... with a large staff of engineers representing prac-
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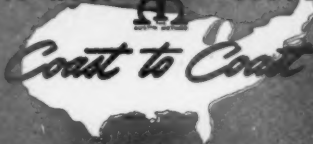


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The Fall of Fagan

President of District 5, United Mine Workers, loses in hard-fought election as result of opposition to Lewis.

For 20 years, Pittsburgh's genial Patrick T. Fagan was the well-liked leader of 40,000 miners in District 5 of the United Mine Workers of America. But when the union's international president, John L. Lewis, gave out the word that Fagan was to be purged for feuding with the Big Boss, the coal miners obediently voted to oust their veteran district president.

• **Fagan Chooses—and Loses—**An important figure in Pennsylvania and well known in labor circles, Fagan lost his chance for wider national notice when he spurned the advice of old friends by refusing to run against Lewis for the U.M.W.A. presidency. Assured that—win, lose, or draw—a national campaign against Lewis would give him a prominence which he could use to fight the dictatorial union policies that he opposed, Fagan chose instead to play it safe and to run for re-election in the district where he felt it wasn't possible for him to be beaten.

In the dingdong election in which Fagan was defeated as district head, the

last powerful force of opposition to Lewis within the U.M.W.A. was removed. The first break in the friendship between Lewis and Fagan was noted in the 1940 presidential election when Lewis came out for Wendell L. Walkie and Fagan supported President Roosevelt. Last June, Fagan and Van A. Bittner were the only two members of the 28-man U.M.W.A. executive committee who refused to sign a resolution assailing C.I.O. President Philip Murray, later removed as U.M.W.A. vice president.

• **So Bittner "Resigned"**—Only a day after the Murray resolution was adopted, the "resignation" of Bittner as president of the huge District 1 of U.M.W.A. in West Virginia was accepted. Dealing with Fagan presented more of a difficulty to the Lewis forces, for he was the elected president of District 5, a nine-county area in western Pennsylvania that constituted one of the largest autonomous units in the mine workers' organization, whereas Bittner was an appointee.

The smooth-functioning Lewis machine bided its time until the biennial district election. Since Fagan ascended to the district presidency in 1922, he had had little or no opposition in the balloting. This time, however, there was relentless competition from John P. Busarello of Pittsburgh, the Lewis-backed candidate. With only half of the miners voting, the official tabulation



FORMER FRIENDS

Only a year ago, Patrick T. Fagan (right) was the principal speaker at a testimonial dinner in honor of John P. Busarello (left), vice president of Pittsburgh District 5, United Mine Workers of America. Last week, in an

election in which the influence of U.M.W.A. President John L. Lewis was a strong factor, Busarello unseated Fagan as president of District 5. Reason for the purge: Fagan—long-time friend of Lewis's "former friend," Philip Murray—refused to dance to the Lewis music.

of the ballots showed that Busarello rode in with his slate of Lewis-supported candidates.

• **Factions Electioneer**—During the campaign, organizers from District 50, the "catch-all" union of the U.M.W.A., aided in pushing Busarello's candidacy. Followers of the C.I.O., from which the U.M.W.A. recently seceded as the aftermath of a long fight, circulated through the district to assist Fagan. Recuperating from an attack of neuritis, Fagan was handicapped in his campaigning.

Temporarily jobless, Fagan's labor experience and loyalty to Murray will almost surely get him placed on the C.I.O. staff. At the last C.I.O. convention in Boston, there was cloak-room talk of inviting Fagan to head a Coal Miners Organizing Committee which would seek to build a rival union in Lewis's own bailiwick. But if he wants to give up the hurly-burly of union organizing, the New Deal, which hasn't forgotten that he's been a consistent and effective Roosevelt man, will find an important government berth for him.

Freeze Pattern

Detroit offers a study in stabilization, with WMC barring job transfers and NWLB fixing low ceilings for one craft.

A realistic job-freezing pattern for war industry appeared to be taking shape in Detroit this week in the wake of ostensibly unrelated moves by the two federal agencies most vitally concerned with stabilization of employment.

• **Stay Put, Workers Told**—The district office of McNutt's War Manpower Commission led off with an order to the 660,000 war-production workers in the automotive capital to keep the jobs they have, subject to specified exceptions. Just how WMC's district director, M. A. Clark, planned to enforce his edict was not explained.

Whether it was so intended, the answer well may lie in the National War Labor Board's directive clamping a ceiling on the wages of tool and die workers in six Michigan counties. By virtue of the enormous demand for their services, tool and die workers constitute the most fluid employee group in Detroit, and many enjoy premium wages of from \$2.25 to \$2.50 an hour.

• **Ceiling Set**—To discourage the foot-loose among them, NWLB set the ceiling at \$1.75 an hour in jobbing shops, \$1.60 in manufacturing plants. The ceiling is applicable to all tool and die workers earning less and to future hirings. It does not reduce existing wage rates.

The reaction of the unaffiliated So-



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ciety of Tool and Die Craftsmen of America, concluding its convention in Detroit, was eloquent proof that the directive hit its mark. Delegates representing 75,000 members denounced it, and J. J. Griffin, president of the society, predicted that enforcement would precipitate a nation-wide work stoppage.

• **Incentive Lost**—Thus, with WMC forbidding job transfers and NWLB hanging a wage ceiling at levels below prevailing rates, much of the incentive to find a better-paying job is destroyed for tool and die workers.

Clark's manpower order applies to skilled workers in 34 categories—not only in the occupations directly concerned with armament production, but also in the agricultural food processing, newspaper publishing, radio broadcasting, transportation, educational, governmental, and clothing manufacturing fields.

• **Five Exceptions**—It forbids any employee in the specified industries to move from one job to another, unless:

(1) He is capable of performing work of higher skill than his employer is willing or able to provide.

(2) He is employed at less than full time for a substantial period.

(3) The distance between his home and his job is unreasonably great in the light of restrictions on gas and tires and the overcrowded transportation facilities.

(4) He has compelling personal reasons for wishing a change.

(5) He is employed at wages or under working conditions substantially less favorable than those generally prevailing.

• **Backstops Included**—These exceptions would seem to leave plenty of loopholes, but the basic regulation also contains a number of backstops. Before a worker can change jobs, he must obtain a certificate of release from his first employer. Furthermore, the transfer must clear through the Detroit U. S. Employment Service office, which functions as a field arm of WMC.

Finally, the order forbids an employer to hire a worker unless he can produce a certificate of release from his previous employer. Failure to conform could produce striking results, for the chief spending agencies—Army, Navy, and Maritime Commission—also have pledged cooperation.

• **Will Be Expanded**—The area covered by the order is to be expanded gradually until, probably by the end of January, it envelopes some 1,100,000 workers in Michigan.

WARD SETTLEMENT READY

The president of Montgomery Ward, Sewell Avery, and the president of C.I.O.'s United Retail and Wholesale Employees Union, Samuel Wolchok, are scheduled to sit down together in Chicago over the weekend and affix

their signatures to a contract written for them by the National War Labor Board and underwritten by President Roosevelt. Washington, however, which saw the same situation once before wind up in a fight that led right to the White House, is watching the proceedings with a somewhat jaundiced eye. On the "once bitten, twice wary" theory, NWLB will only be certain that the Chicago Ward case is cleared off its docket when word comes that all the dotted lines have been filled.

Nevertheless, there seems to be little ground for last minute complications. Avery has publicly stated that he is accepting the Presidential order which calls for signing an agreement containing a clause making it clear that the company is signing "under protest." The agreement also provides for wage rates to be in effect for a year, seniority, arbitration, and maintenance of union membership—items that Avery refused to accept without attaching a proviso stating they were written "under duress" when the White House asked him to accept them before (BW—Dec. 12 '42, p7).

Unions Dissolved

NLRB further defines outposts of legitimacy in inside unions by rejecting one union constitution and one contract.

Two recent National Labor Relations Board rulings on the legality of independent unions serve to clarify standards that the board is using to test whether such unions meet the requirements for bona fide collective bargaining organizations.

• **Employer Control Feared**—In one case involving Elizabeth Arden, Inc., NLRB ordered an inside union dissolved because its constitution provided that an employee, to become an officer, had to be continuously employed by the firm from one to three years. The board held that such a provision subjected the organization to the employer's control.

In the other case, coming to the board because of A.F.L. and C.I.O. protests against an inside organization at Wright Aeronautical Corp.'s Lockland (Ohio) plant, NLRB ordered disestablishment of an employees' association because its contract with the employer barred anybody but employees as collective bargaining representatives, thus, in effect, preventing any outside affiliation.

• **Big Election Year**—Although NLRB is outshone by the war-born labor agencies, it continues to handle a full complement of cases. In its last annual tabulation, which includes ten war months, the board reports that it con-

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ducted a total of 3,629 collective bargaining polls in which 963,753 employees participated. This is, by far, the busiest "election" year it has had. C.I.O. units carried 42.7% of the elections; A.F.L. organizations won 33.1% and the rest saw unions rejected or independent organizations victorious.

Christmas Goose

Employers may expect to hear union demands for gifts to the government—at the expense of the corporation.

Thanksgiving was the first holiday after President Roosevelt's executive order banning double pay for holiday work unless it fell on the seventh consecutive work day (BW-Oct. 10'42, p5). Specified in many labor contracts as a "holiday" when workers would get either the day off or double time, Thanksgiving, for the first time in many years in many plants, was this year just a work day.

• **Unhappy Situation**—A number of unions affiliated with the Congress of Industrial Organizations were none too happy about the situation. They were, however, prevented from making effective protests in Washington because the whole idea for doing away with double time was developed and sold to the President by C.I.O.'s auto workers union.

Earlier in the year the auto workers promulgated their "Equal Sacrifice" program (which advanced another notion the White House subsequently took up—the \$25,000 a year salary limit), and they announced that one sacrifice labor was prepared to make was giving up premium pay for Sundays and holidays.

• **Union Takes Action**—Reluctant to let the matter rest, one big C.I.O. affiliate, the United Electrical, Radio, and Machine Workers Union, started a campaign under a strong-talk slogan: "It is the policy of this union that not one single penny saved by companies as a result of the executive order shall find its way into the already ample, if not exorbitant, profits of these corporations."

U.E.R.M.W.U. contracts call for double holiday pay, and all its locals were instructed to "demand that the sum saved by the companies as a result of the executive order be paid to the Treasury of the United States" as an employee contribution toward paying for the war. The union announced that thus far it has got ten companies with 17 plants to agree to its proposal.

• **Those in Agreement**—The companies are, Thomas A. Edison Industries, Inc.; White Sewing Machine Co.; Continental Electric Co.; Fairchild Aviation Corp.; American Transformer Co.; Tung-Sol Corp.; Industrial Manufactur-

ing, Inc.; Diamond Tool Research Co.; Premier Metal Etching; and Associated Foundries & Mfg. Co. Representations have been made to General Electric, Westinghouse, R.C.A., Philco, and all the other major firms which have U.E.R.M.W.U. contracts.

TIME OUT TO SEEK PEACE

There is no hidden significance in the National Labor Relations Board announcement that the Portland (Ore.) hearings on unfair labor practice charges against three Henry J. Kaiser shipbuilding companies (BW—Nov. 28 '42, p. 94), are postponed until Jan. 11, after being set to open this week. The postponement will give behind-the-scenes peace-makers, who thus far have worked hard but without success, an opportunity to continue their efforts to find a compromise between A.F.L. and C.I.O. interests which, meeting head-on in Portland, threaten to disrupt employee relations in Kaiser's vital war plants.

If a compromise cannot be found, the competing unions will go to the mat in January over the issue of whether Kaiser's closed shop contracts with the A.F.L. are collusive and in violation of the Wagner Act. The C.I.O. has called on NLRB to treat Kaiser "like any other antilabor employer," and it is an accusation to which both the A.F.L. and Kaiser take strenuous exception.

High officials of both competing labor organizations have opened Portland headquarters to lay out campaign strategy "on location."

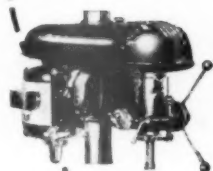
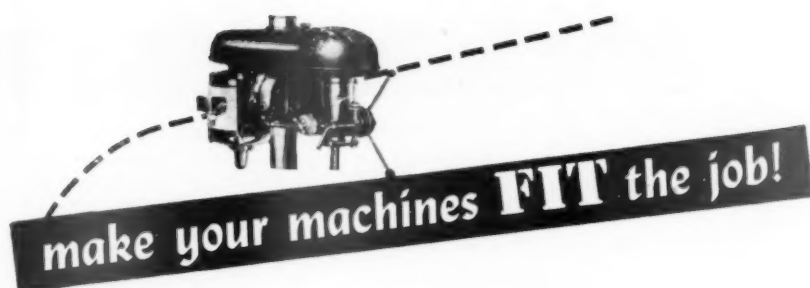
The NLRB postponement resulted directly from the death of the father of NLRB's trial attorney. A short recess would have opened the proceedings too near Christmas. Therefore Jan. 11 was chosen. That's the day after Office of Defense Transportation Director Eastman's "no holiday travel" restrictions are lifted.

HIRING HALL OPPOSED

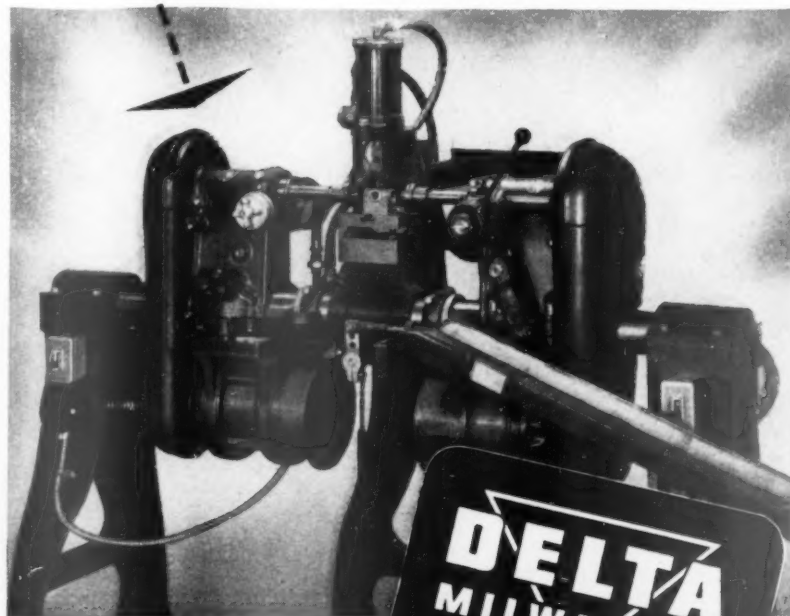
Taking vigorous exception to a National War Labor Board fact-finding panel's recommendations that a union-operated hiring hall be given authority to man its vessels on the Great Lakes, Inland Steel Co. this week requested a public hearing on the matter before the full board in Washington.

Inland declared that "since the season of navigation is now closed, it is of much greater importance that the board act wisely than that it act fast," and said it would be "dangerous in the highest degree" to give C.I.O.'s National Maritime Union this "strange system of hiring" on the Lakes.

The company's strenuous objection, fundamentally based on the charge that the hiring hall is equivalent to the closed shop, is counted on to secure a full Washington hearing.



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FINANCE

Auditors Worry

Three pressing deadlines lead accountants to wonder if they can clean up corporation statements on time.

Roughly 75% of all American companies close their books on Dec. 31 each year and begin a new fiscal period. For the next three months their accountants work frantically to audit the records and verify the various reports that must go out to stockholders, creditors, and government agencies. Ordinarily they contrive to finish before their deadline, but this year they expect trouble and lots of it.

• **Extensions Sought**—To head off some of the impending grief, accountants are already trying to persuade supervisory authorities to grant extensions of time in cases that involve complicated auditing problems. Most companies, they think, will be able to get out reports on schedule, but some—particularly those with big war contracts—will take months to get their books verified and adjusted.

A company closing its books on Dec. 31 faces three main deadlines (the nearest only two and a half months away): (1) On Mar. 15, it must file an income tax return with the Bureau of Internal Revenue; (2) if it is listed on the New York Stock Exchange, it must send stockholders their annual report before the end of March; (3) by Apr. 30, it must file Form 10-K—the detailed summary of the year's financial record—with the Securities and Exchange Commission.

• **Relaxation Expected**—Both the SEC and the Stock Exchange have been strict in the past, but this year a company with a tricky auditing problem may probably count on getting an extension from both of them. As far back as last April, the American Institute of Accountants, foreseeing year-end difficulties, sounded them out on the subject and got sympathetic answers.

The Stock Exchange tentatively agreed to allow an extension in hardship cases provided the stockholders got their report at least 15 days before the annual meeting. It suggested that companies with early meeting dates could adjourn them without transacting business until the report was ready.

• **Reasonableness a Factor**—SEC told the accountants that it would consider auditing trouble a valid reason for delaying Form 10-K. Both SEC and the Stock Exchange, however, will grant extensions only in particular cases, and

a company that wants more time must make a special request for an extension.

The Treasury's attitude on extensions is still an unknown quantity. Some accountants say pessimistically that it will probably remain so until next March. Several years ago the Treasury would accept delayed returns without much question. The taxpayer simply filed a tentative estimate of his income and started paying on it. When he fin-

ished his audit he filed a complete return and corrected his payments to take care of any excess or deficiency. (Usually it was an excess, since taxpayers deliberately overestimated income to keep from chancing the penalty interest rate on underpayment.)

In the past few years, however, the Treasury has been getting tougher about deferred returns. And last spring it clamped down on all but the most extreme hardship cases.

• **Turning Down Business**—Accountants say stoically that it doesn't matter much what stand the Treasury takes. Even if it were a hanging offense, they still

Insurance Funds Go To War

Although the Assn. of Life Insurance Presidents canceled its convention this year, its statisticians put together the usual elaborate breakdown of investment figures usually served up at the annual meeting. In a report to the members, Vincent P. Whitsitt, manager and general counsel, outlined the invest-

ment position of the 49 companies, which own 91.5% of all the country's legal reserve company assets. The following table, which has been compiled from Whitsitt's figures, shows a breakdown of insurance company portfolios as of Dec. 31 and a comparison with 1941 (figures for 1942 partly estimated):

INSURANCE IN FORCE

	1941	1942
All Legal Reserve Companies.....	\$124,673,238,000	\$130,000,000,000

ADMITTED ASSETS, 49 COMPANIES

	1941	Per cent of Total	1942	Per cent of Total
	Amount		Amount	
Farm Mortgages.....	\$802,119,000	2.7	\$803,000,000	2.5
Other Mortgages.....	4,904,756,000	16.4	5,179,000,000	16.3
U. S. Gov't Bonds.....	6,414,353,000	21.4	8,500,000,000	26.7
Municipal Bonds.....	1,696,025,000	5.7	1,526,000,000	4.8
Canadian Bonds.....	625,275,000	2.1	692,000,000	2.2
Railroad Securities.....	2,986,957,000	10.0	2,859,000,000	9.0
Utility Securities.....	4,774,219,000	15.9	5,105,000,000	16.1
Other Bonds, Stocks.....	2,068,740,000	6.9	2,096,000,000	6.6
Policy Loans.....	2,582,278,000	8.6	2,391,000,000	7.5
Real Estate.....	1,643,564,000	5.5	1,491,000,000	4.7
Cash.....	780,797,000	2.6	500,000,000	1.6
Other Admitted Assets.....	657,854,000	2.2	658,000,000	2.1
Total.....	29,936,937,000		31,800,000,000	

INVESTMENTS IN CORPORATE SECURITIES

	1941	1942	Per cent Change
Utility Bonds and Stocks			
Bonds.....	\$4,604,494,000	\$4,935,000,000	+7.18
Preferred Stocks.....	142,932,000	144,000,000	+0.75
Common Stocks.....	26,793,000	26,000,000	-2.96
Railroad Bonds and Stocks			
Bonds.....	2,918,519,000	2,789,000,000	-4.44
Preferred Stocks.....	51,739,000	51,000,000	-1.43
Common Stocks.....	16,699,000	19,000,000	+13.78
Other Bonds and Stocks			
Bonds.....	1,773,884,000	1,784,000,000	+0.57
Preferred Stocks.....	214,169,000	228,000,000	+6.46
Common Stocks.....	80,687,000	84,000,000	+4.11
Total Corporate Securities.....	9,829,916,000	10,060,000,000	+2.34

Most significant trend appearing in these figures is the rapid increase in holdings of government bonds, amounting to more than \$2,000,000,000 for the year. Governments now make up 26.7% of all the companies assets. (In 1930 they were less than 2%.) This makes them by far the largest single class of security in the

49 insurance companies' portfolios.

In other respects, the asset position of the 49 companies shows only small changes in comparison with last year. While the companies are putting most of their new money into Treasury securities, they have not undertaken any extensive liquidation of other assets.

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MORE than 34 million gallons of oil a day are rolling into the East in tank cars.

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part of their bigger job of hauling 1¼ million tons of freight a mile every minute round the clock.

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THE MARKETS

Although the stock market showed signs of stiffening this week, most traders are holding off and watching to see where it goes from here. Both in formal theory and in ordinary rule-of-thumb reckoning, the next couple of weeks are likely to be decisive in showing the underlying trend of prices. A lusty rally at this point would be the best news bulls have had since the uptrend got under way last spring.

• **Rails Fairly Convincing**—Railroad securities came in for a good deal of attention this week and, on the whole, made out fairly well in spite of bad news. The average has been seesawing back and forth for the last couple of weeks, but most traders are relieved to see that on balance it hasn't lost much.

On Tuesday, the roads filed their answer to Price Administrator Leon Henderson's request for cancellation of the rate increases that took effect last spring (BW—Dec. 12'42, p14). The roads argue that rate boosts have not made up the cost of the wage raises they were intended to offset. In a full year, the new rates would bring in about \$357,000,000 in extra revenue, while the additional wage cost totals about \$397,000,000.

• **The Old Tax Rumpus**—OPA's campaign was not the only thing that kept railroad security holders in suspense. At Trenton, N. J., the ancient battle over New Jersey railroad taxes flared up again. Attorney General David T. Wilentz opened his test case challenging the constitutionality of 1941 and 1942 statutes that allowed an adjustment of back taxes and penalties (BW—May 30'42, p67).

The Jersey tax case has gone on for so long that most investors have stopped worrying about it, but the final decision will make a lot of difference in the financial standing of some of the roads

with large mileage in the state. Jersey Central, for instance, went into Section 77 reorganization in 1939 when the state tried to collect defaulted taxes. On the years 1932 to 1940 it owes a total of almost \$14,000,000 excluding penalties.

• **"Tax Bankruptcy"**—In the six years from 1935 to 1940, Jersey Central was averaging less than \$2,000,000 a year available for fixed charges. Since then, war traffic has helped it to make a fast comeback, and this year it will probably have about \$9,000,000 available for fixed charges. Until the tax situation straightens out, however, there isn't much chance that it will try to come out of bankruptcy.

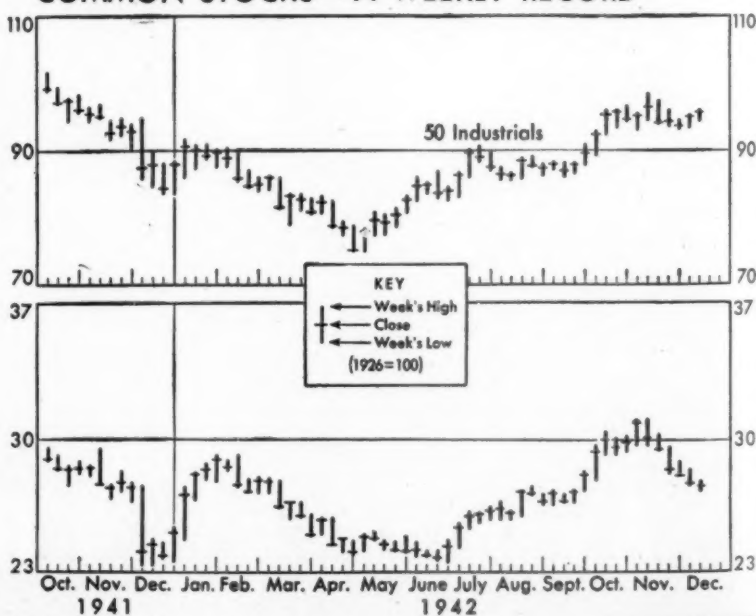
There has been a lot of speculation recently about roads that might take advantage of the McLaughlin Act to work out voluntary debt readjustments. Delaware & Hudson's plan for handling its \$48,000,000 maturity next May is due any day now. Some railroad men also expect the Baltimore & Ohio to ask for a postponement on the \$50,000,000 worth of 4% notes that mature in August, 1944.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial . . .	95.7	95.0	94.0	88.0
Railroad	27.6	27.8	29.5	24.5
Utility	34.8	34.0	35.5	33.7
Bonds				
Industrial . . .	115.2	114.9	114.6	105.1
Railroad	85.9	86.4	87.4	82.3
Utility	108.6	108.8	108.4	104.7
U. S. Govt. . .	109.4	109.4	109.9	110.8

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS—A WEEKLY RECORD



couldn't make the deadline on some of the tangled auditing jobs that face them in companies with enormously expanded war business. Most accounting firms are already carrying the heaviest volume of work in their history. Many will not accept any more clients; some are trying to drop their newer customers.

At a rough estimate, accounting firms have lost between a third and a half of their staffs since the war began. Selective service is squeezing them painfully, and offers from government agencies and private companies have taken a lot of their men. Tightest pinch is in young men with enough experience to handle jobs on their own, subject to final check by a senior member of the firm.

• **More and Fussier Work**—The biggest headache, however, is not manpower but the rising volume of work. Even the firms that have kept their staffs more or less intact find their top men swamped with the job of supervising and overseeing the work of subordinates.

War business accounts for most of the extra work. As business activity goes up, the auditor's difficulties automatically increase. Introduction of new methods and new products adds further complications. One of the worst problems is the government cost-plus contract where the auditor "has to count every blessed postage stamp and paper clip."

Prodded by the American Institute of Accountants, some companies have tried to spread their auditing work over the year, but only a few have managed to get much work done in advance. Accountants predict that the year end accumulation of work will be the heaviest on record.

ANOTHER BOMB SHELTER

Newest item in the steadily growing insurance line of the War Damage Corp. is enemy raid coverage for money and securities. Beginning Dec. 21, WDC will insure money up to \$2,000,000 and securities up to \$10,000,000 at rates ranging from 25¢ to \$1.50 on \$1,000.

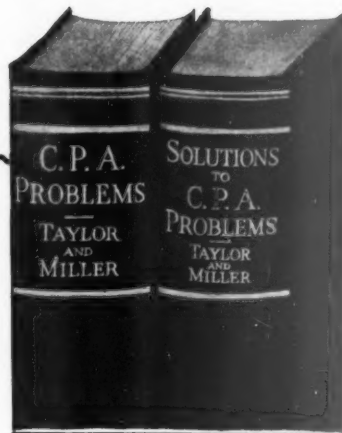
The regular casualty and surety companies will act as agents of WDC in writing policies and collecting premiums. This setup parallels the arrangement WDC made with fire underwriters for handling enemy raid coverage on property (BW—Jun.13'42,p24).

FURTHER AUTO RATE CUT

Like the casualty insurance companies that trimmed liability rates (BW—Oct.31'42,p89), automobile underwriters had few statistics to guide them when they decided to scale down collision insurance premiums for rationed drivers. While they expect that gas ra-

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tioning and lower speed limits will reduce the number of accidents, they have no way of making precise estimates. Their object in cutting rates is to make a rough adjustment that will keep policyholders (and public officials) content until they have had a chance to accumulate more data.

Holders of A ration books get a 20% cut in premiums. Drivers with B cards are due for 10%. Cuts apply to all new and renewal policies, effective Dec. 1, but they are not retroactive on coverage written before then.

While these cuts are somewhat smaller than the reductions that casualty companies made in their liability coverage, automobile underwriters think they are all that circumstances warrant. The number of highway accidents has been decreasing, but the average size of claims has been on the way up for some time. Shortages of materials and rising wages have boosted repair costs by about one-third in the last year.

MORGAN'S "OUTSIDERS"

When J. P. Morgan & Co. elected four outsiders to its board of directors this week, it finished another stage in the process of converting itself to a public institution. Following Morgan's incorporation in 1940 and the public sale of stock last winter (BW—Feb. 7'42, p82), election of the new directors brings the famous House on the Corner close to the end of its evolution from a private partnership to a more or less ordinary commercial bank.

Until this week, Morgan had no directors not directly connected with the bank. Now, out of 17 directors, four are outsiders.

It can hardly be said, however, that J. P. Morgan & Co. has let down the bars. The newcomers are not of the hoi polloi. Their names: Alfred P. Sloan, Jr., chairman of General Motors Corp.; E. Tappan Stannard, president of Kennecott Copper Corp.; James L. Thomson, chairman of the finance committee of Hartford Fire Insurance Co.; and John S. Zinsser, president of Sharp & Dohme, Inc.

INTRASTATE-INTERSTATE

As the Supreme Court slammed the door on further legal action, Public Service Corp. of New Jersey took its place alongside Niagara Hudson as an intrastate utility system which falls under jurisdiction of the Securities and Exchange Commission. The Court this week refused to review a lower court decision declaring that P. S. of N. J. is a subsidiary of United Gas Improvement and, therefore, subject to the holding company law. While United owns less than 50% of the stock in P. S. of N. J., according to SEC's definitions it has working control.

THE TRADING POST

War Work and Efficiency

A letter from a war-plant employee:

Those two letters published in your column of Nov. 28 interest me as a citizen and as a defense plant worker.

The complaint regarding "idle time" among defense workers has been one of over a year's duration, and I have had ample time to investigate it, and have reached some conclusions.

First, a good deal of it is exaggerated. Records of most plants will show that the total number of workers in many cases has declined during the year, and production per worker has increased. Better tooling, new-of-production methods, scheduling and, most important, material delivery, are responsible for much of this improvement.

Second, the thrusts made at labor union slowdown in some cases may be justified, but they cast a false impression. Union labor resistance to speedup is not universal by any means. Believe it or not, there are some unions which actually cooperate with management in these times. (I am not a union member.)

Third, the main difficulty seems to be with the kind of top-management that firmly believes that it has no method of keeping track of daily-productivity-per-individual-worker. Time and time again I have tried to interest the plant management where I work in the investigation and adoption of some simple method of having each worker record his daily output but without effect or explanation.

I have even urged that "idle time" records be kept by junior foremen, and an effort be made to divert idle workers to makeshift jobs, like house-cleaning, store-room work, etc. The general impression seems to be that such shifting of workers from job to job during the day would violate the job-classification rules set up by industrial engineers and approved by collective bargaining. It seems that we have too many rules and regulations which are issued mainly for the purpose of carrying dozens of executive signatures, but which frustrate intensive production.

I am forced to the reluctant conclusion that much present-day plant management consists of younger men who are more concerned with the gestures and insignia of industrial management than with "cutting the Gordian knot" to get the end result.

"Cutting-corners for the sake of getting things done" was the principle taught me in the past decades when I was being schooled in the facts of business life. These new administrators seem to think little of the practice.

One point made in this letter has to do with the effect of war-production conditions on some of the younger men who have come into managerial positions during the war. Excessive preoccupation with the "gestures and insignia of industrial management" is part of this but even more important is their habit of thinking in terms of wartime standards of performance.

A war economy puts volume and de-

liveries at the top of management's concerns. Dollar costs sink to the foot of the scale. No one asks about those, no one cares about them—except, of course, a top management that is wondering how it ever will get back on a peacetime competitive basis if its executives go off the "gold standard" of dollar costs and begin to measure their managerial prowess exclusively in terms of "how much and how fast."

It is a popular delusion that the pressure of war makes us efficient. It doesn't. It merely teaches us how to meet more speedily the ever mounting demands of a single giant customer, having sovereign power to enforce his will, and the entire wealth of the nation at his disposal. So cost goes out the window. That is the way to win wars. But it isn't the way to run a business that must serve millions of free customers in a competitive market. And that is why top management now is wondering how it ever will get its lieutenants to put the dollar sign back into management.

Save by Using?

A letter from M. L. Evans, of Richmond Metal Products Co., St. Louis:

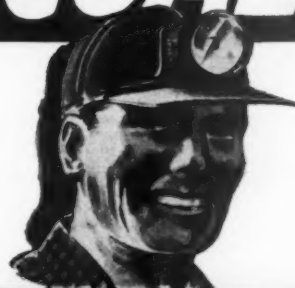
On page 47 of your Nov. 28 issue, you show a reproduction of a chassis of a car from "Life" magazine. (Illustration is part of an advertisement for "Life"—Ed.) This indicates the wear on the different tires, and why they should be rotated to lengthen the life of the tires. The weird thing about it all is that on the rear end of the chassis is a picture of a spare and this is included in the rotation. This is justified by the following words. "Spare depreciates with disuse." Either they are wrong or the people in Washington that issue edicts by which we are now governed are wrong.

I have been reading in the newspapers constantly that we are rationing gasoline to save rubber. If the spare tire depreciates with disuse, wouldn't the other four tires on the car depreciate standing in the garage at home? I have been told repeatedly by rubber men that the spare must be circulated because it depreciates faster with disuse than do the four tires on the car which are in constant use. Either they are wrong, or rationing gasoline and forcing cars into disuse is wrong.

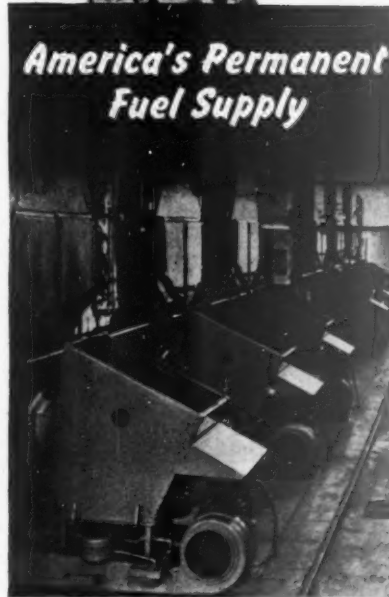
If reader Evans' major premise is true—i.e., that the spare depreciates faster with disuse than do the four tires in constant use—he would seem to have a point. But it isn't quite that simple. Surely the amount of driving to which the tires are subjected is a factor. Then too arises the question whether by rotation to insure wear we do not get more mileage out of the set of five tires than we could by holding one out regularly as a spare. Maybe some other reader can offer precise quantitative evidence on the point.

W.C.

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THE TREND

THE MALEPOWER PROBLEM

Any approach to our manpower problems must begin with a recognition of the over-all shortage of our human resources as compared with our conceivable requirements (BW—Sep. 19'42, p100). And, that imposes upon us a limit and a pattern in our production and military plans for the size of the armed forces, the armament program, and the civilian economy.

• But that is not the problem for Mr. McNutt. His job is to effect with minimum disturbance that readjustment of our labor force to war which the statistical planners so facetiously outline on paper (BW—Nov. 28'42, p88). And by that standard his administration will be measured.

To begin with, he must achieve the fullest mobilization of our manpower—through extension of hours, award of war contracts to labor surplus areas, enlistment of women reserves, etc. He must reduce the dislocations attendant upon the draft—a need now partially satisfied by the banning of enlistments, increased emphasis on occupational deferments, use of Manning Tables, and centralization of job-training facilities (page 15). He must make the labor market work for war—by job “freezes” in certain industries and localities (for example, Detroit, page 93), by manipulation of substandard wages, and by breaking transport and housing bottlenecks.

But, it would be nonsense to suppose that Mr. McNutt, or anyone else, can do a perfect job. The complications imposed by war, as well as by the anachronistic hangovers of peace, can never be entirely overcome—certainly not all at once. Thus we cannot, arbitrarily, close the 40% differential between agricultural and industrial wages, or ignore the time-and-a-half overtime tradition, or dispense with strategic placement of war plants.

• But more than that, the very composition of the labor force complicates the readjustment to war. Mr. Hoover's recent admonition to think through our manpower problem in terms of male and female resources separately has met with little response from a public overwhelmed with glamor photos and stories of how women welders, machinists, and even armed guards are doing what we used to consider a man's work. The facts of the matter, however, support Mr. Hoover.

In the first place, it is still true that the soldiers and sailors who will fight this war will be men. What's more—and vitally neglected—a great number of the war jobs which must be done at home must be done by men. The degree to which that is true is indicated by the job-census of 1940. In April of that year, some 34,000,000 men and 11,100,000 women were at work. But it is enlightening to divide them roughly into two fields—agriculture, mining, construction, heavy-goods manufacturing, transportation, and public utilities on the one hand, and on the other, light-goods manufacturing,

wholesale and retail trade, personal and professional services, finance. In the first group there were 18,600,000 men to 1,300,000 women—93.5% male. In the second, there were 15,400,000 men to 9,800,000 women—only 61% male. Thus, 88.3% of the women were engaged in light work. More specifically, in April, 1942, it was found that of the more than 5,000,000 workers in steel, machinery, shipyards, lumber, aircraft, and other heavy lines, more than 95% were male.

• The problem of male labor is becoming particularly acute now. For one thing, our utilization of men is now nearly complete. Secondly, the very war industries we must expand are primarily heavy goods, highly male, whereas the areas of female employment, such as trade, services, and light-goods, are being contracted. Finally, we must in 1943 make another heavy drain of some 4,000,000 men into the armed forces in order to reach a total military establishment of 10,000,000. This will be half of the total in our cream-of-manpower 18-37 age groups, and perhaps half of the remaining 10,000,000 will be unfit for military service and, therefore, in many cases, presumably unfit for some industrial jobs.

The obvious effect of all this is to emphasize the need for women to take over men's jobs. Preliminary data of the Bureau of Labor Statistics and the Bureau of Employment Security anticipate by the end of 1943 a rise to 45% in the proportion of women to the total doing non-war work. The corresponding percentages in war work are expected to go from 23% to 30%, in agriculture from 7% to 10%, and these are sharp gains, as compared with those between 1941 and 1942.

In the first place, it remains questionable whether those substitutions of women for men can be attained—in the light of previous data on heavy versus light work. Moreover, where the exigencies of war necessitate that women take over jobs that men should do, productivity declines and the total requirements in manpower to meet projected programs increase.

Sooner or later, this tendency will assert itself with accumulating impact. It has in Britain and Germany, and it will here. The war itself, with its continuing drain on men for the military, must inevitably accentuate it.

• And all this means that increasingly Mr. McNutt must deal with man power, and not just manpower, and therefore, his problems of transferring and allocating labor will be multiplied. More, the limit imposed upon our economy by this bottleneck in males is actually more severe than the mere totals of our human resources have led us to believe. And that is food for thought—not only for Mr. McNutt, but also for our military and production planners.

The Editors of Business Week

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